SAMSUNG

S-NET mini

Basic : MST-S3W
Model : MST-S3W
Model Code : MST-S3W

SERVICE Manual

S-NET mini

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Refer to the service manual in the GSPN(see the rear cover) for the more information.

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1. Precautions

1-1. Precautions for the Service

- **Use the standard parts when replacing the electric parts.**
  – Confirm the model name, rated voltage, rated current of the electric parts.
- **Repair the disconnection of HARNESS securely when repairing the break down.**
  – If there is any connection error, it causes an abnormal noise and incorrect operation.
- **In case that you assemble or disassemble the products with laying it on the side, do work on the work cloth.**
  – If not, the exterior of products can be scratched.
- **Remove dust and foreign materials from harness, connection part, and inspection part thoroughly when repairing the break down.**
  – It protects the danger of fire such as tracking and short.
- **Check the assembly status of parts after repairing the break down.**
  – It should be same as the status before repairing.

1-2. Precautions for the Static Electricity and PL

- **As the PCB power terminal has a weakness for the static electricity, pay attention to it during the repair and measurement.**
  – Work with insulation gloves during the repair and measurement of PCB.
- **Check the distance between the product and the other electronic appliances such as TV, video, and audio. It should be over 2m.**
  – If not, it causes a bad picture quality or a noise.
- **Repairing the products by consumer should be strictly prohibited.**
  – There is a danger of electric shock or fire due to incorrect disassembly.

1-3. Precautions for the Safety

- **Do not pull any electric wires and do not touch an auxiliary power switch with a wet hand.**
  – There is a danger of electric shock or fire.
- **In case any wire or power plug has been damaged, replace it to eliminate any possible danger.**
- **Do not bend the power cord by force and do not put any heavy object on the power cord.**
  – There is a danger of electric shock or fire.
- **Do not use multi socket.**
  – There is a danger of electric shock or fire.
- **Ground the product if necessary.**
  – Be sure to ground the product if there is any danger of electric leakage due to water or moisture.
- **Be sure to turn off the auxiliary power switch or pull out the power plug during replacement or repair of electric parts.**
  – There is a danger of electric shock.

2. Product Specifications

2-1. The Feature of Product

2-1-1. Features

■ **S-NET mini**

1. Integrated control system which controls the system air conditioner installed in a small and medium-sized buildings.
2. Touch Screen's great usability and the user friendly interface provides easy control of the system air conditioner.
3. It can be used with Centralized controller, Transmitter and DMS.

● **PBA : Main PBA**

- SAMSUNG S3C2440 Processor
- NAND Flash Memory
- Touch Screen
- 7″ Wide LCD

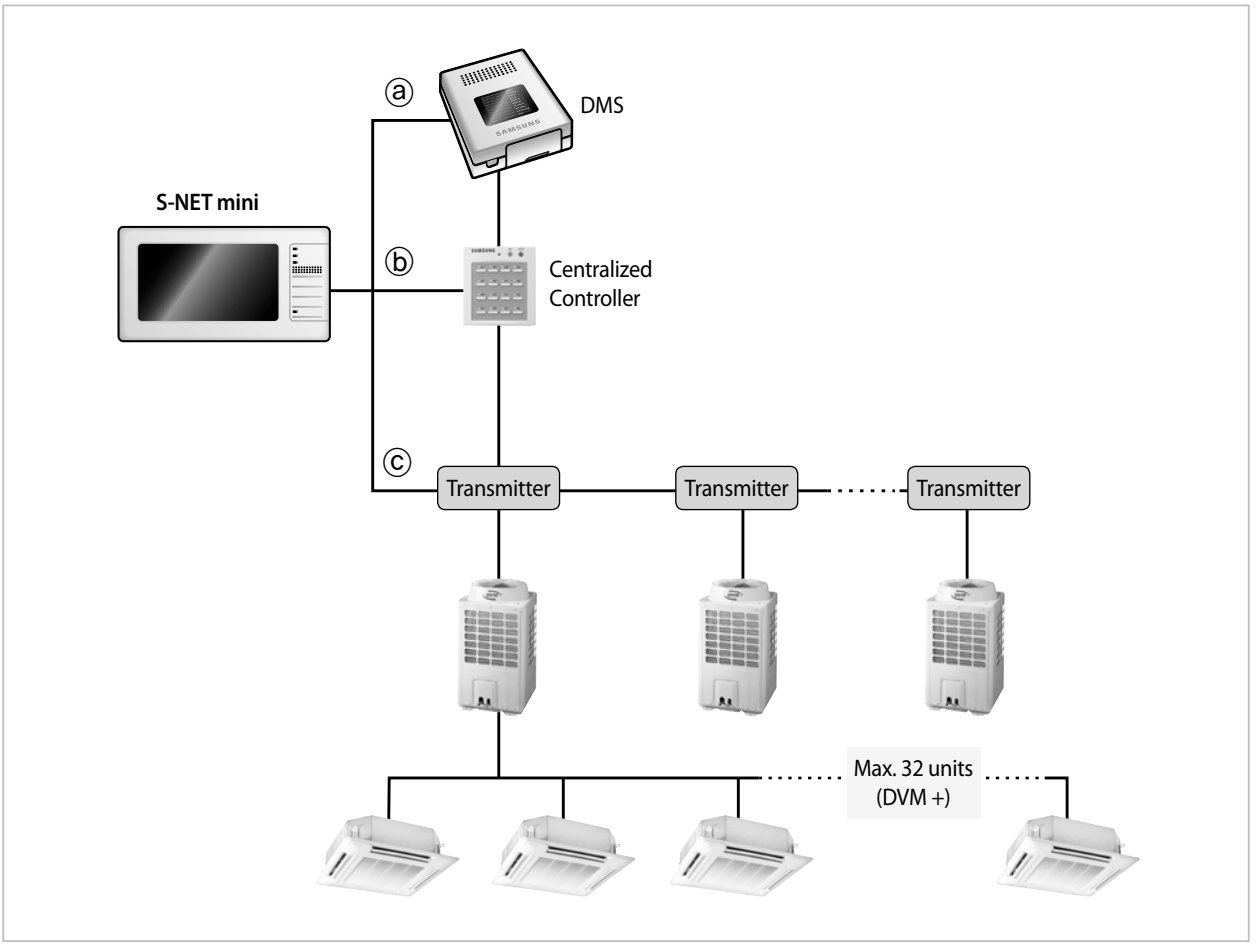
● **System S/W**

- WinCE .NET 5.0
- Device drivers
  - LCD/Touch Screen
  - NAND Flash
- Serial and Ethernet based communication

● **Application S/W**

- Basic control
- Schedule management
- Error log enquiry
- Compatible communication with DMS , Centralized controller and Transmitter.

2-1-2. System Organization



※ You can select type ⓐ, ⓑ or ⓒ to use S-NET mini.

- **Connecting S-NET mini with DMS (Type ⓐ).**
  - You can control up to 4 DMS and 256 indoor units by using S-NET mini.

- **Connecting S-NET mini with Centralized controller (Type ⓑ).**
  - You can control up to 16 Centrlized controllers and 256 indoor units by using S-NET mini.
  - You can not use DMS.

- **Connecting S-NET mini with Transmitter (Type ⓒ).**
  - You can control up to 16 Transmitters and 256 indoor units by using S-NET mini.
  - You can not use Centralized controller and DMS.

You can choose one of connection type ⓐ, ⓑ or ⓒ.

◆ If you choose connection type ⓐ, you can use the S-NET 3 simultaneously.
- If you connect S-NET mini and the S-NET 3 simultaneously, choose 'individual' tracking.

◆ If you choose connection type ⓑ, you can not connect DMS to the Centralized controller.

◆ If you choose connection type ⓒ, you can not connect Centralized controller to the Transmitter.

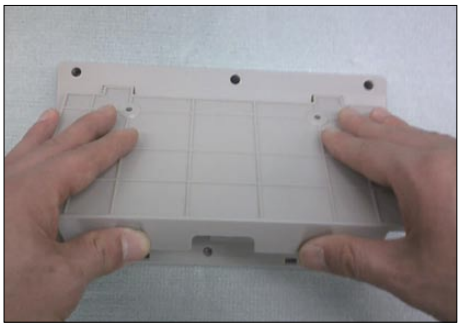
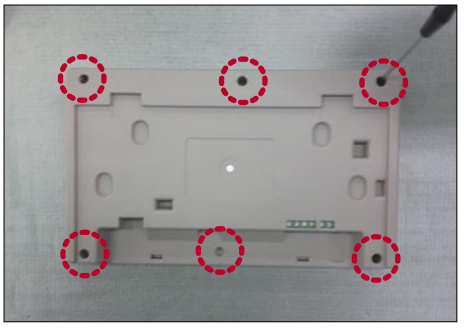
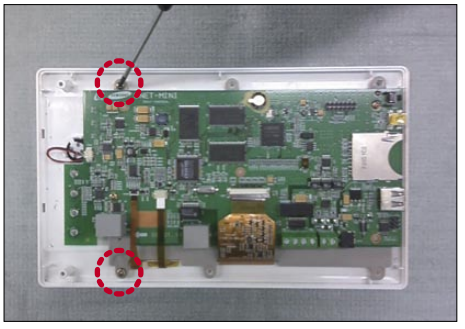
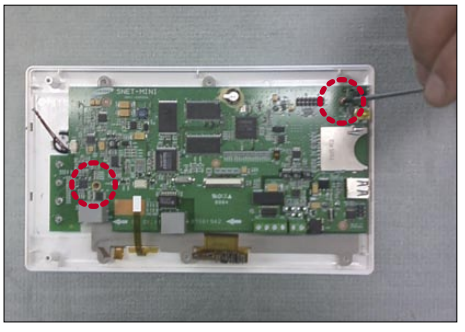
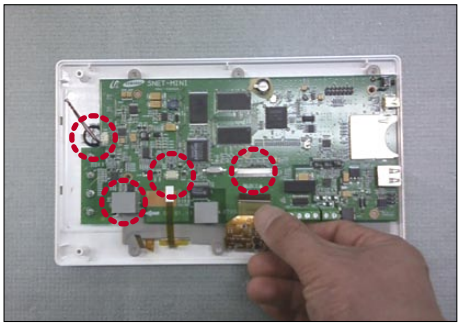
2-1-3. Main Function

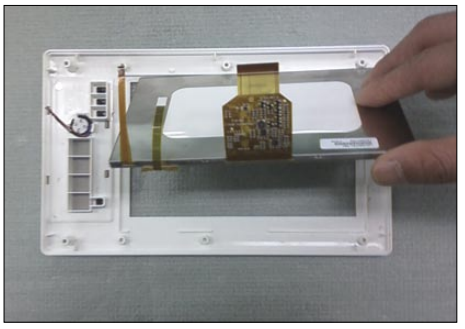
Type	Item	Description	Remark
S/W	User Interface	Touch Screen's usability and intuitive user friendly GUI.	
	Indoor unit control	Temperature, operation mode, airflow direction of Indoor unit connected to DMS, Centralized controller, and the Transmitter can be remotely controlled.	
	Schedule management	Indoor unit operation schedule can be managed in weekly/daily period.	
	Zone management	Zone setting and rename option can be used to easily control the indoor units.	
	Security and lock	Security password and lock function can be used to limit access to other people.	
	DVM information	Error log, connection status, cycle status of the indoor and outdoor units can be checked.	
	Peak power control	Peak power can be managed or monitored through the DMS that is connected to the Peak transmitter.	Only available with DMS connection
	Emergency stop fucntion	Emergency stop of the air conditioner by external contact signal.	Only available with DMS connection
	Extra fucntion	Time setting, Volume control, IP setting, Stylus adjustment etc.	
	H/W Test function	H/W Test program for S-NET mini is installed.	
	OS, SW Update	OS and SW update program is provided to update S-NET mini.	
	Function test	Function test program included.	

3. Disassembly and Reassembly

■ Necessary Tools

Product Name	Remark
+SCREW DRIVER	

No.	Parts	Procedure	Remarks
1	S-NET mini	1) Press 2 hooks on the bottom to detach the rear side bracket.	
		2) Unscrew 6 fixing screws and remove the cover. (Use + Screw Driver) ⚠ Be careful not to damage the parts such as USB connector when you disassemble/ assemble the product.	
		3) Unscrew 2 fixing screws which secures PCB and the LCD. (Use + Screw Driver)	
		4) Unscrew 2 screws fixing screws on the PCB. (Use + Screw Driver)	
		5) Disassemble 4 connectors connected to the PCB.	

No.	Parts	Procedure	Remarks
		6) Disassemble the PCB and the LCD module.	

4. Troubleshooting

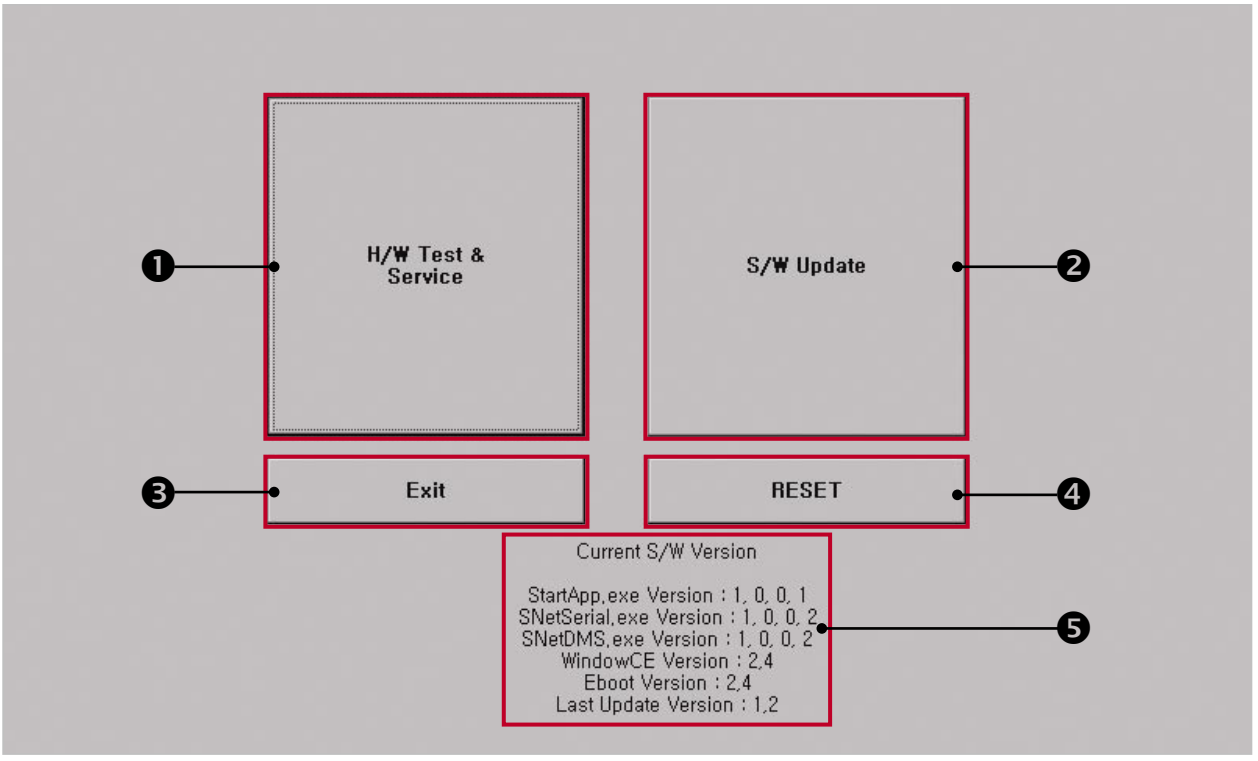
4-1. Items to be Checked First

Problem	Check	Explanation/Solution
DMS is not connected.	Is the DMS turned on?	DMS should be powered on all the time. Check the DMS is turned on, and connect the DMS again.
	Have you set DMS as your communication device?	Check the communication setup from [System setup] → [Communication setup].
	Did you correctly set the IP for S-NET mini and the DMS?	Check the S-NET mini IP from [Hardware setup] → [IP setup].
		Check the DMS IP from [Hardware setup] → [DMS IP setup].
	Is LAN cable connected to the DMS correctly?	Check if LAN cable is connected to the DMS correctly. It is impossible to connect the DMS to S-NET mini without LAN. Consult a network manager for further information.
	Doesn't the DMS have any defect?	Check the status of the DMS.
	Did you correctly set the IP for S-NET mini and the DMS?	Check the S-NET mini IP from [Hardware setup] → [IP setup]. (Make sure IP is correct and not repeated.)
		Check the DMS IP from [Hardware setup] → [DMS IP setup]. (Make sure IP is correct and not repeated.)
	Is your network status normal?	Check if the network status is normal. Consult network manager for further information.
The indoor unit information is not displayed.	Did you execute tracking?	Tracking should be executed to get the information of all devices within DVM system. Execute tracking from Tracking menu.
	Is the DMS connected to the centralized controller correctly?	Check the communication cable between the DMS and the centralized controller. Be careful with the RS485 communication cable because it has polarity. Same problem can occur when the centralized controller power is off.
	Is the centralized controller connected to the transmitter correctly?	Check the power/communication cable between the centralized controller and the transmitter.
Indoor units are out of control.	Is LAN cable properly connected?	Check the LAN cable and the LAN indicator on S-NET mini.
	Is DMS communication correctly connected?	Check the power/RS485 communication cable.
	Is Peak power management mode in operation?	In Peak power management mode, 'Turning on the indoor unit' or 'Changing operation mode to Cool/Auto/Dry' will be restricted.

Items to be Checked First (continued)

Problem	Check	Explanation/Solution
Peak power management is out of order.	Does the DMS communication have any problem?	Check the DMS communicates with the interface module. It is impossible to execute Peak power management if the DMS does not function properly.
	Did you assign the indoor unit in a group before PEAK power management alarm level has turned on?	If the indoor unit is not assigned in a group, indoor unit will not be included in PEAK power management even the alarm level has turned on.
Common exception days are not applied.	Wasn't the schedule made before the common exception days are set?	Any changes to common exception days does not affect previously created schedule. Select Exception days on the schedule menu and edit common exception days to apply the common exception days,
Schedules are not edited.	Isn't there any disconnected DMS among all of the connected DMS?	To edit schedules, DMS should be connected to S-NET mini. If it is not connected, viewing schedule is only available.
Set temperature does not change.	Have you applied temperature limit (Upper/Lower limit temperature)?	If lower temperature or upper temperature is set, set temperature is restricted within those range.
S-NET mini display is frozen.	Check if you can control the function.	S-NET mini program is down. Press the Reset button on the side of the product.
S-NET mini display is not visible.	Is the screensaver (backlight off) on?	Press any button or tap anywhere on the LCD
Schedule is not operating in desired time.	Did you synchronize the time for S-NET mini with DMS?	Set the correct time on S-NET mini and synchronize time with DMS.
	Is Peak power management mode in operation?	In Peak power management mode, 'Turning on the indoor unit' or 'Changing operation mode to Cool/Auto/Dry' within the schedule and all the other events will be ignored.
Sound is not working.	Did you check the volume control to make sure it is not in 'Low'??	Check the volume from [H/W Setup] → [Volume control].
Remote controller is out of control.	Did you disable wired/wireless remote control?	Enable wired/wireless remote control from [Indoor unit control].

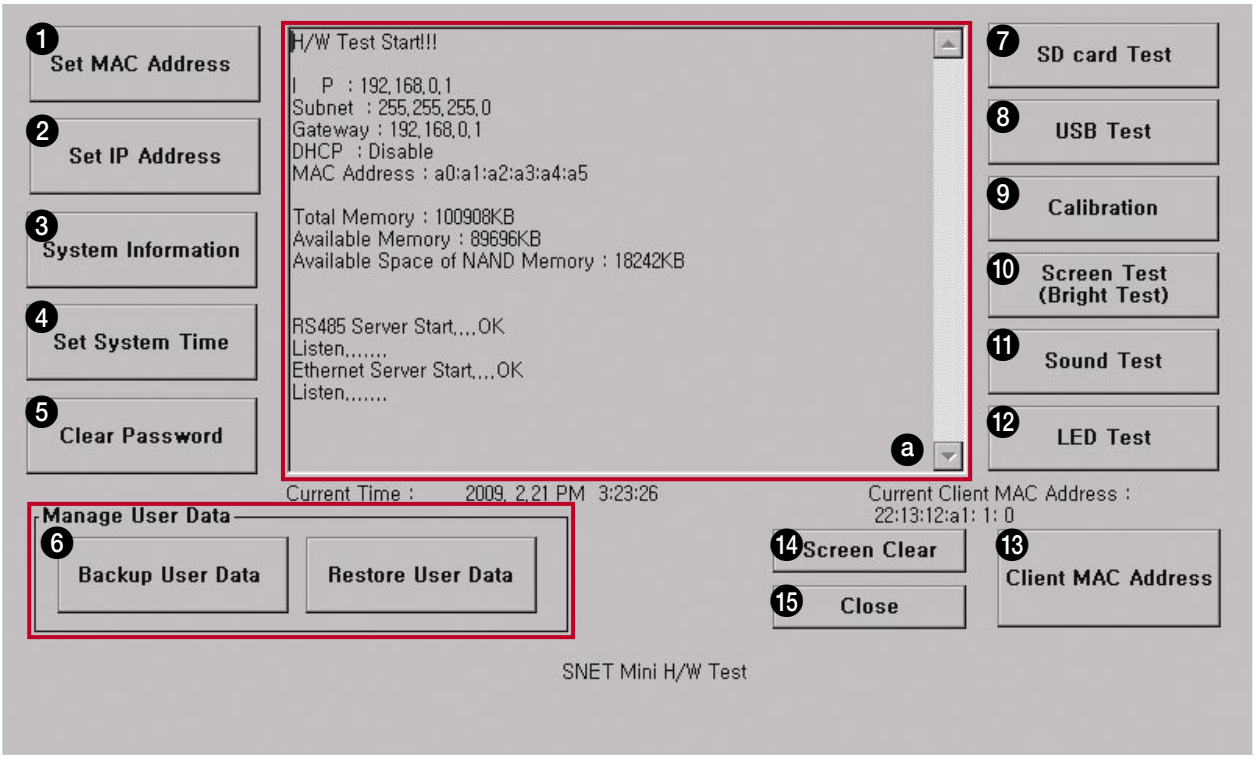
4-2. H/W Test



No.	Description
1	H/W test menu
2	S/W Update menu
3	Exit software update
4	Reset
5	Software and OS Version

- **Prepare SD memory card with saved 'AppRecover.exe' file.**
  → AppRecover.exe file directory: ₩Storage Card₩

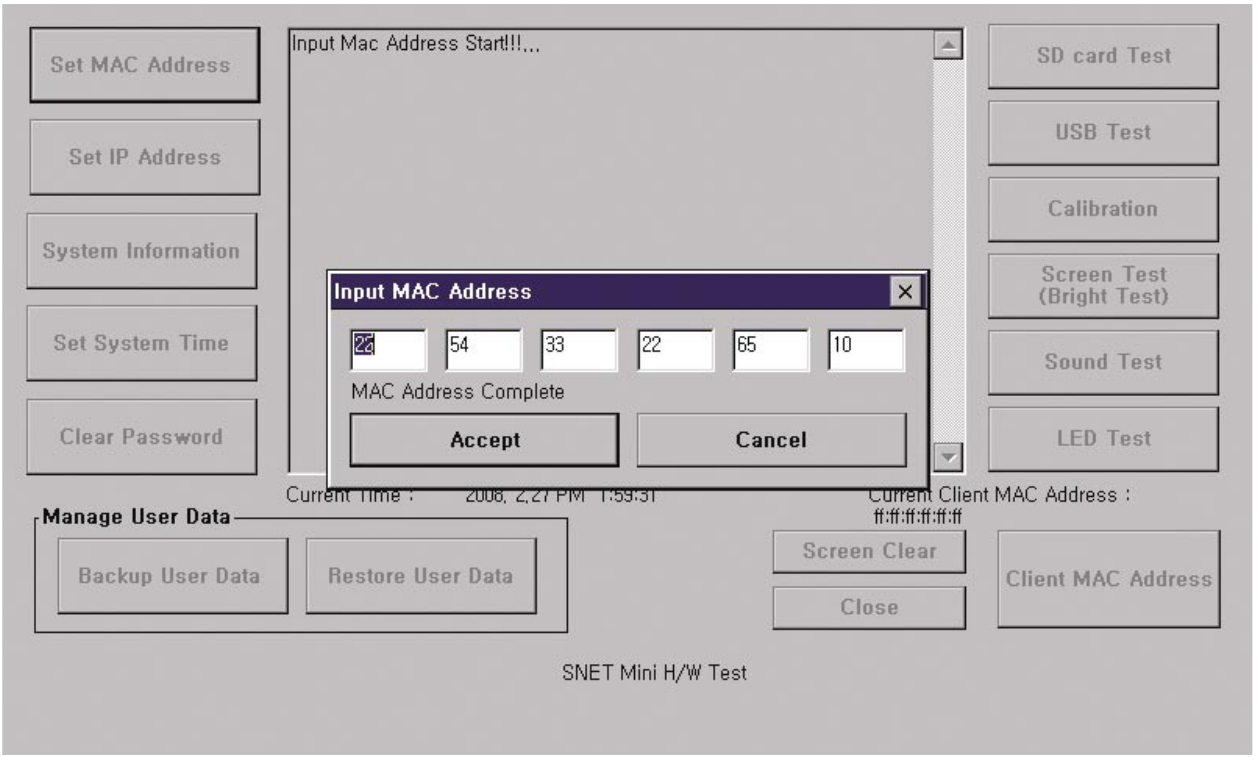
- **Insert the SD memory card on the memory card slot located on the side of S-NET mini.**
  → When the SD memory card is inserted, H/W Test window will appear automatically.



No.	Description
a	Status Window
1	Set H/W MAC Address
2	Set IP Address
3	System Information (S/W Version information and MAC Address, IP setup, Memory usage)
4	Set System Time
5	Clear Password
6	Backup and Restore User Data
7	SD Card Test
8	USB Test
9	Screen Calibartion
10	Screen Brightness Test
11	Sound Test
12	LED Test
13	H/W production Test (Not in use)
14	Screen Clear
15	Exit H/W Test

◆ IP address will change to 192.168.0.1 every time you access H/W Test menu.
Set IP Address(button ❷) before closing the H/W Test menu.

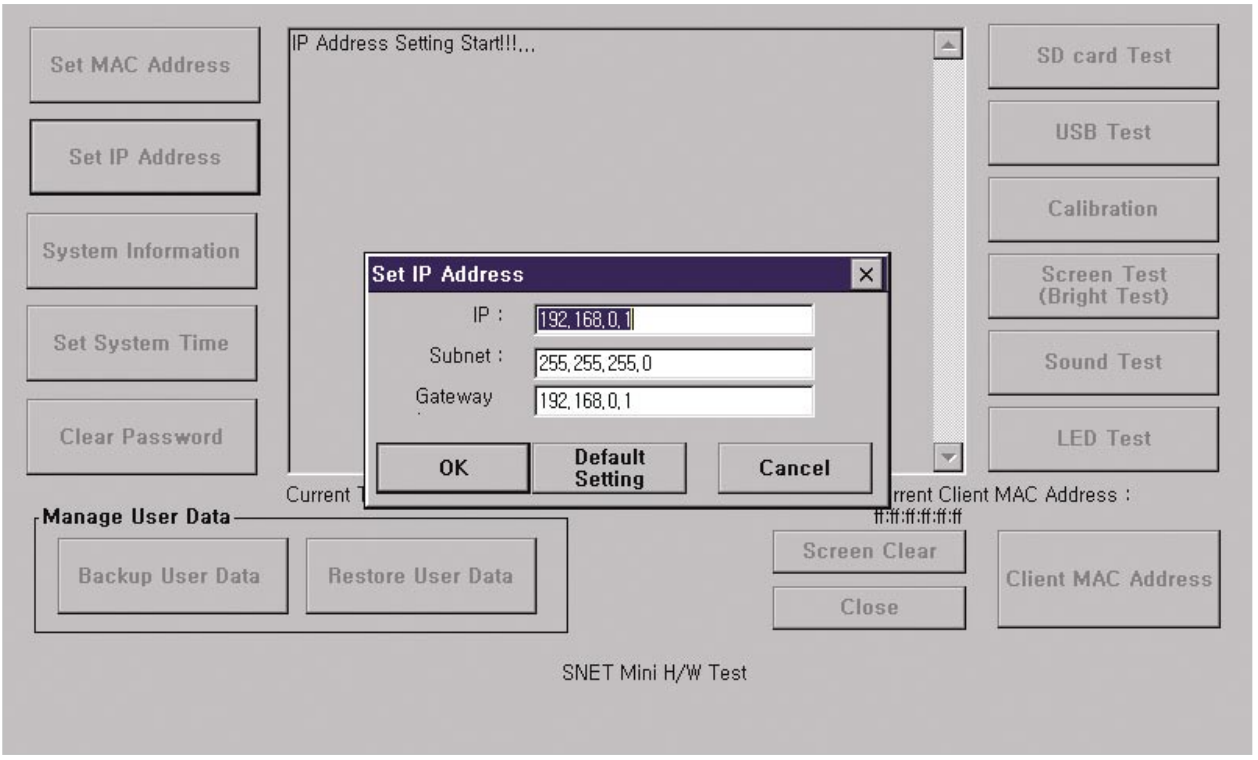
❶ Set MAC Address



● **Set the MAC Address to your device.**

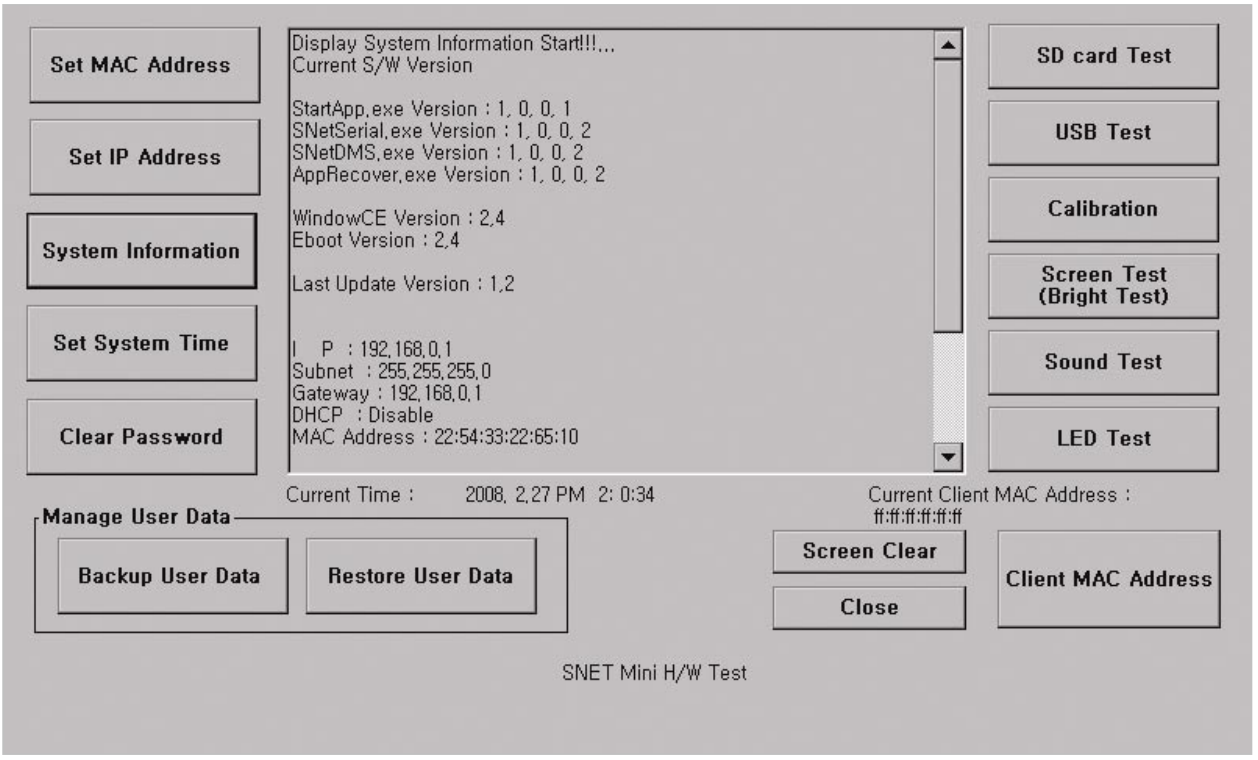
◆ Do not change the MAC Address recklessly.

❷ Set IP Address



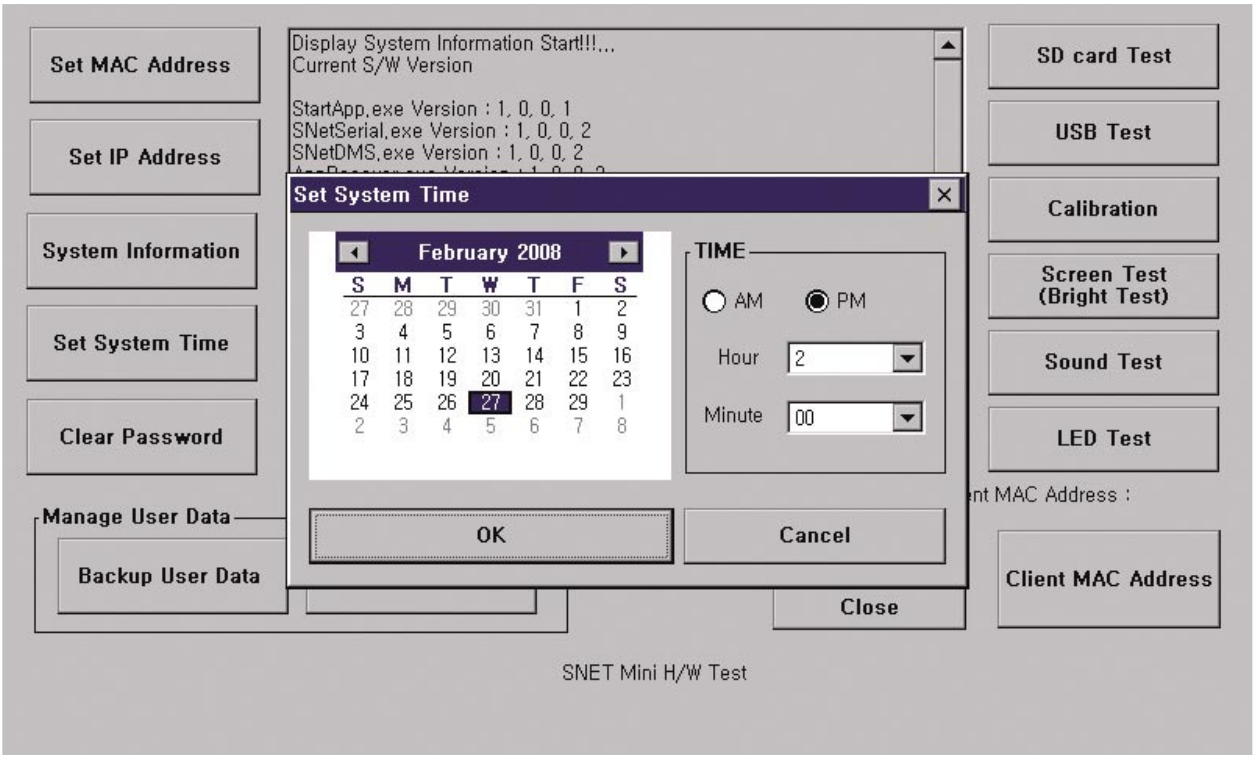
● **Set the IP Address of your device.**

❸ System Information



● **S/W version information, IP Address, and memory usage will appear on the status window.**

❹ Set System Time



● **Check and edit the time on 'Current Time' if it is incorrect.**

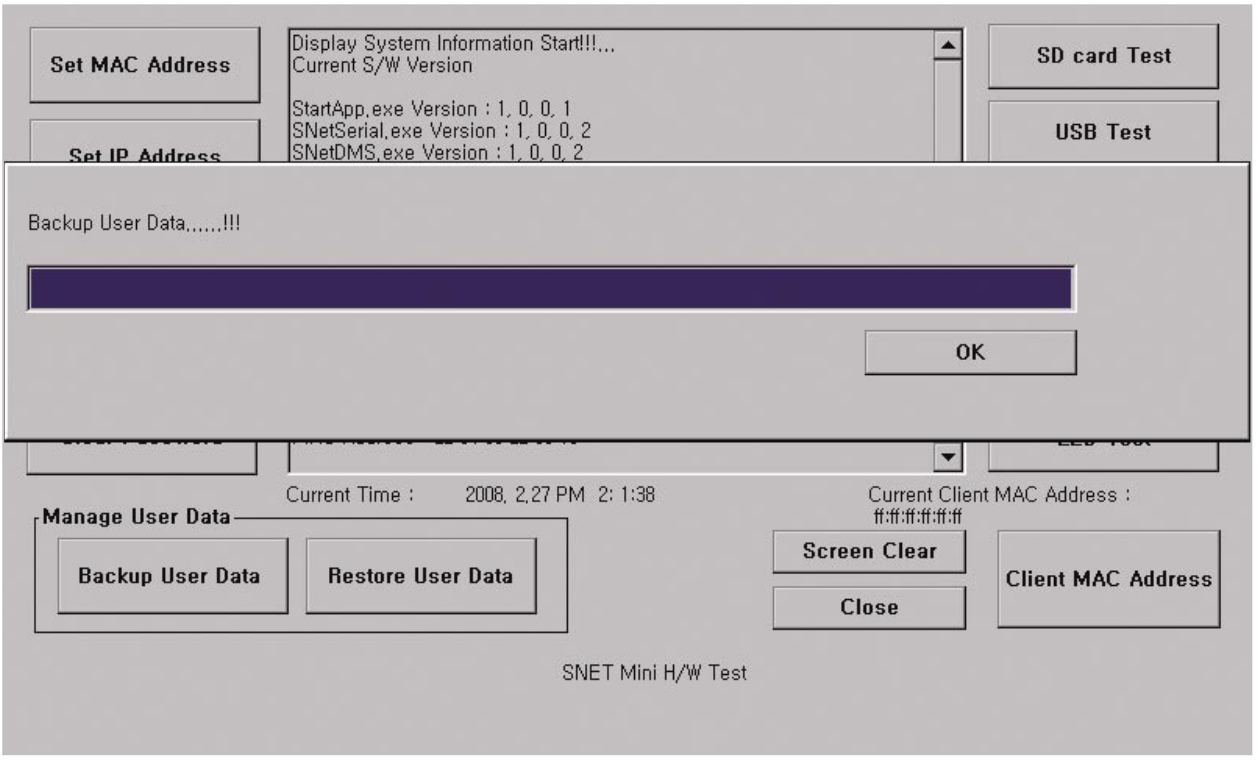
◆ When you set the time, you should set the year in between 1980~2079. When you enter the year outside those range, your time will not be applied.

❺ Clear Password

● **Reset the S-Net mini's password to default '0000'.**

❻ Manage User Data

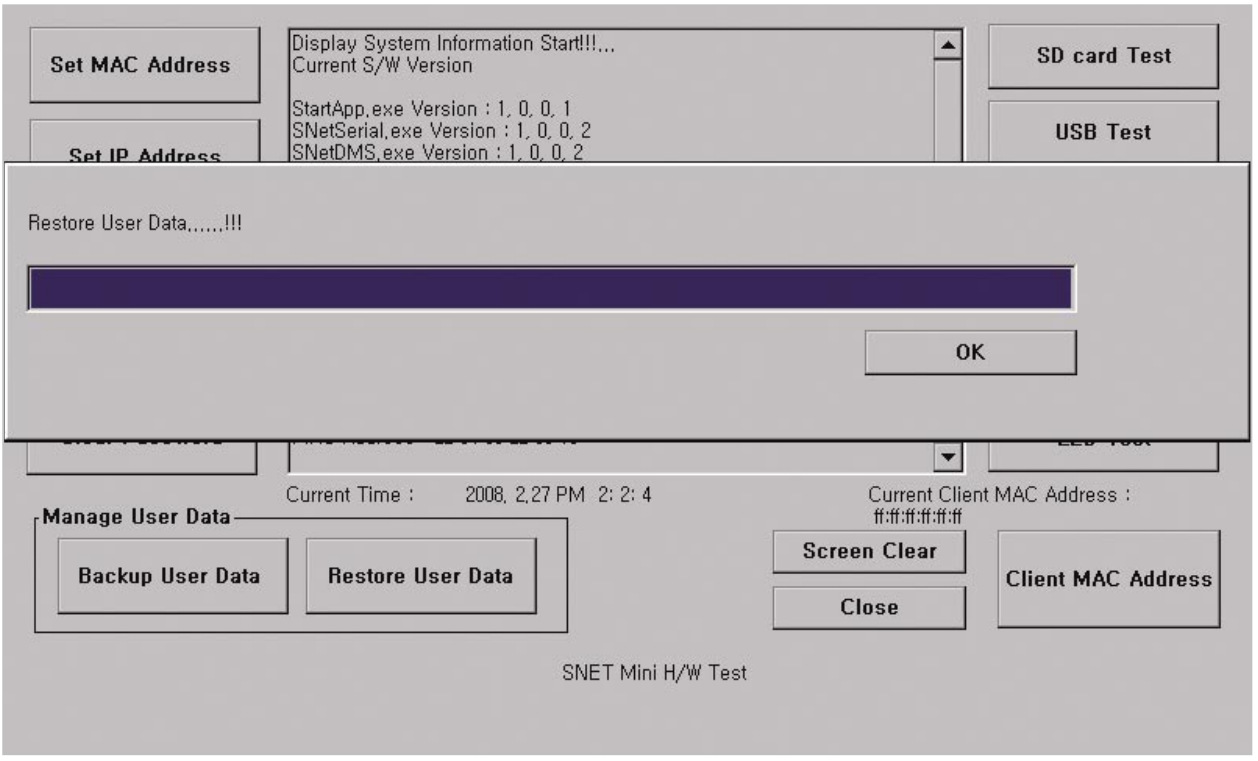
■ Backup user data



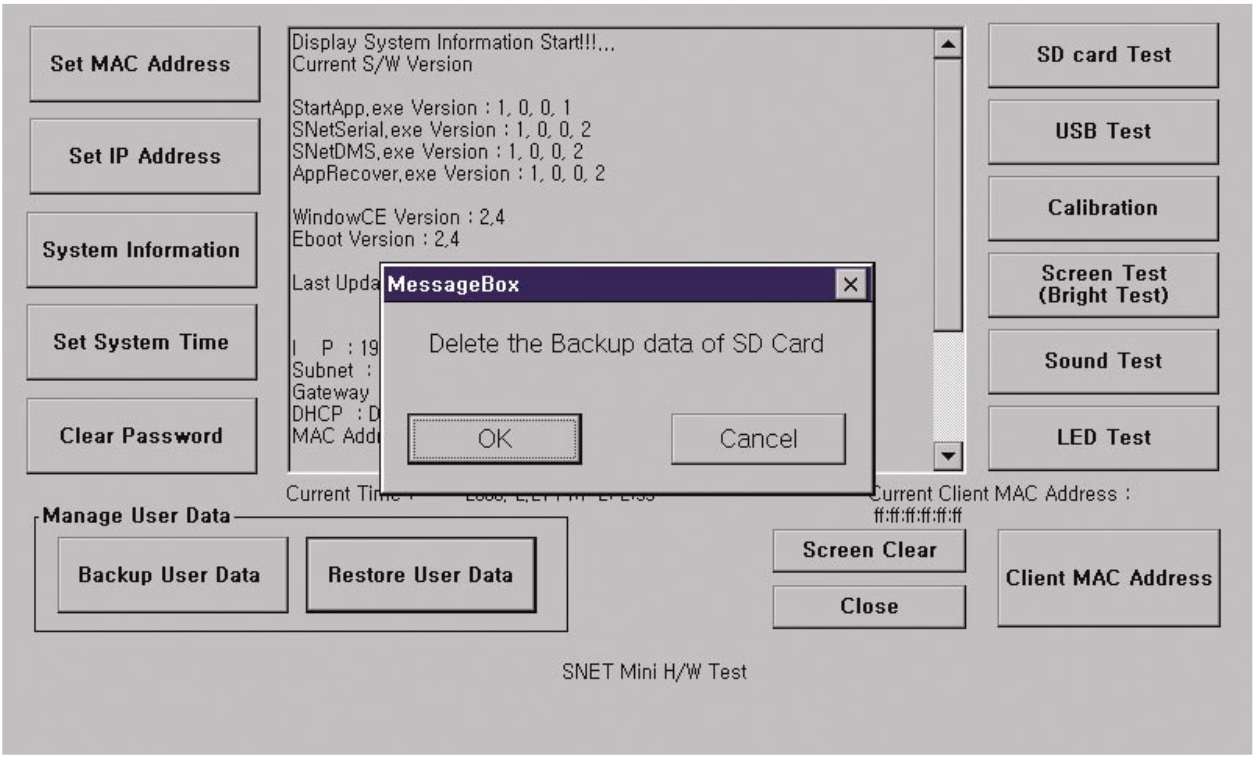
● System will backup user data file under '₩Snet_Storage ₩Bin₩Sys' directory.
Backup data file will be saved under '₩Storage Card₩Backup₩Data' directory.
Backup data includes Zone management, Schedule management and System setup data.

❻ Manage User Data (continued)

■ Restore user data

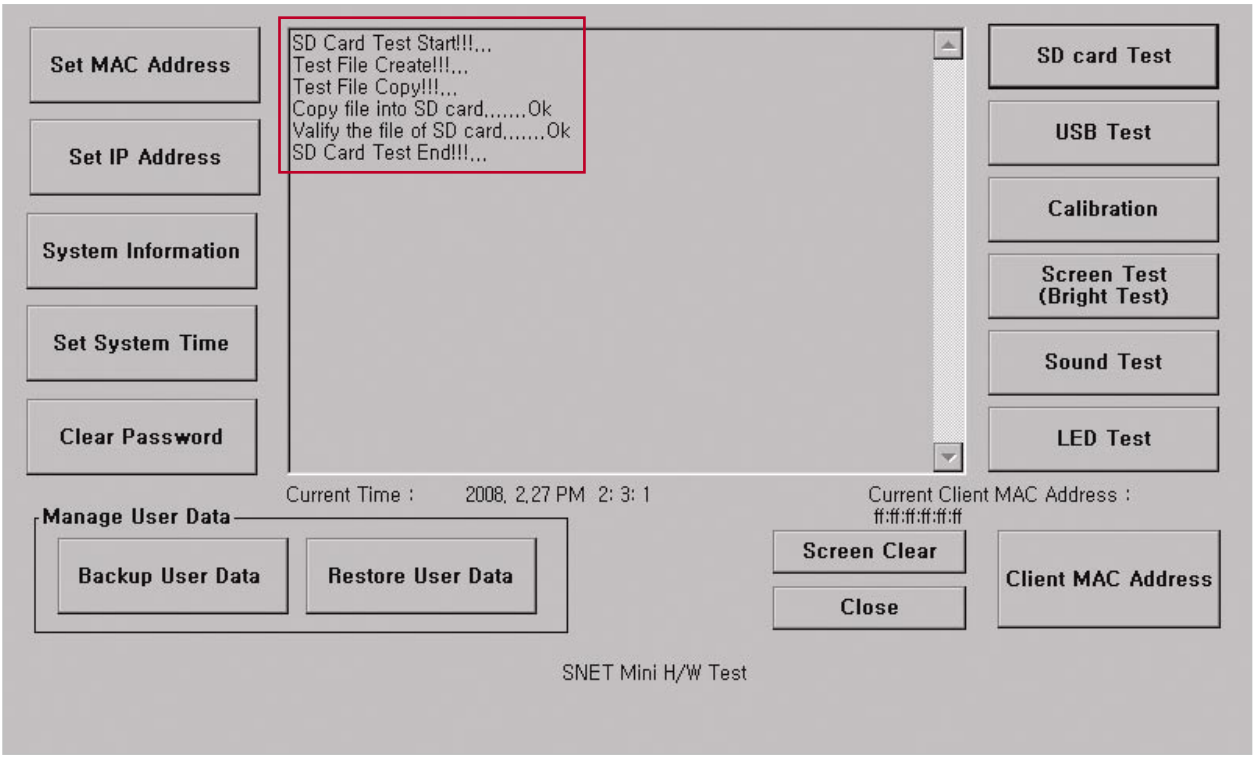


● Restore the user data on the SD memory card. (File source: ₩Storage Card₩Backup₩Data).



● Tap [OK] button to delete user data in SD memory card.

❼ SD Card Test



● **SD Card Test will proceed in order of writing temporary file on SD memory card followed by validating the file.**

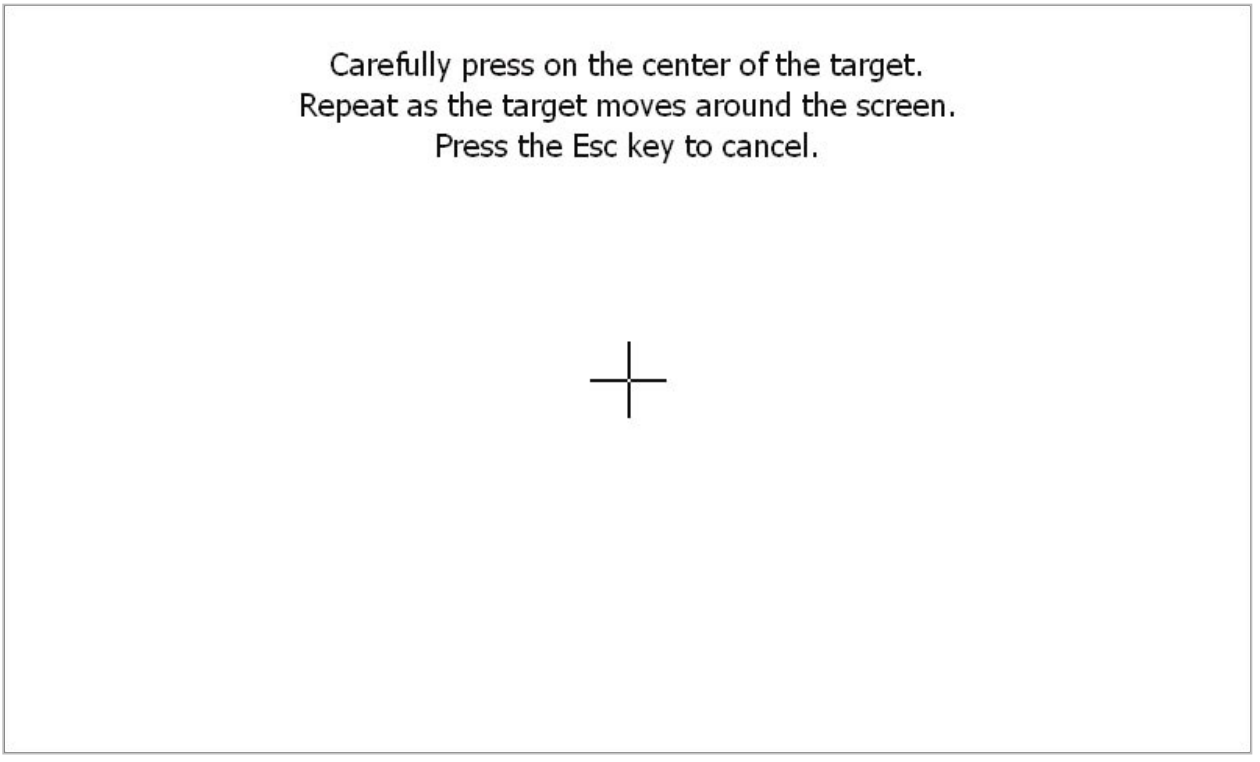
◆ Make sure SD memory card is in slot for the test.

❽ USB Test

● **Identical message from SD Card Test will appear on the window.**
USB Test will proceed in order of writing temporary file to the USB storage followed by validating the file.

◆ Make sure your USB storage is connected for the test.

❾ Calibration



● **Start the screen calibration for correct stylus input signal.**

❿ Screen Test (Bright Test)

● **Adjust the brightness of the screen from 5 different levels.**

⓫ Sound Test

● **Adjust the volume of the device from 3 different levels.**

⓬ LED Test

● **Test the LED by flickering the light twice on data indicator and the error indicator.**

⓭ Client MAC Address

● **This menu is not used for service.**

⓮ Screen Clear

● **Reset the status window.**

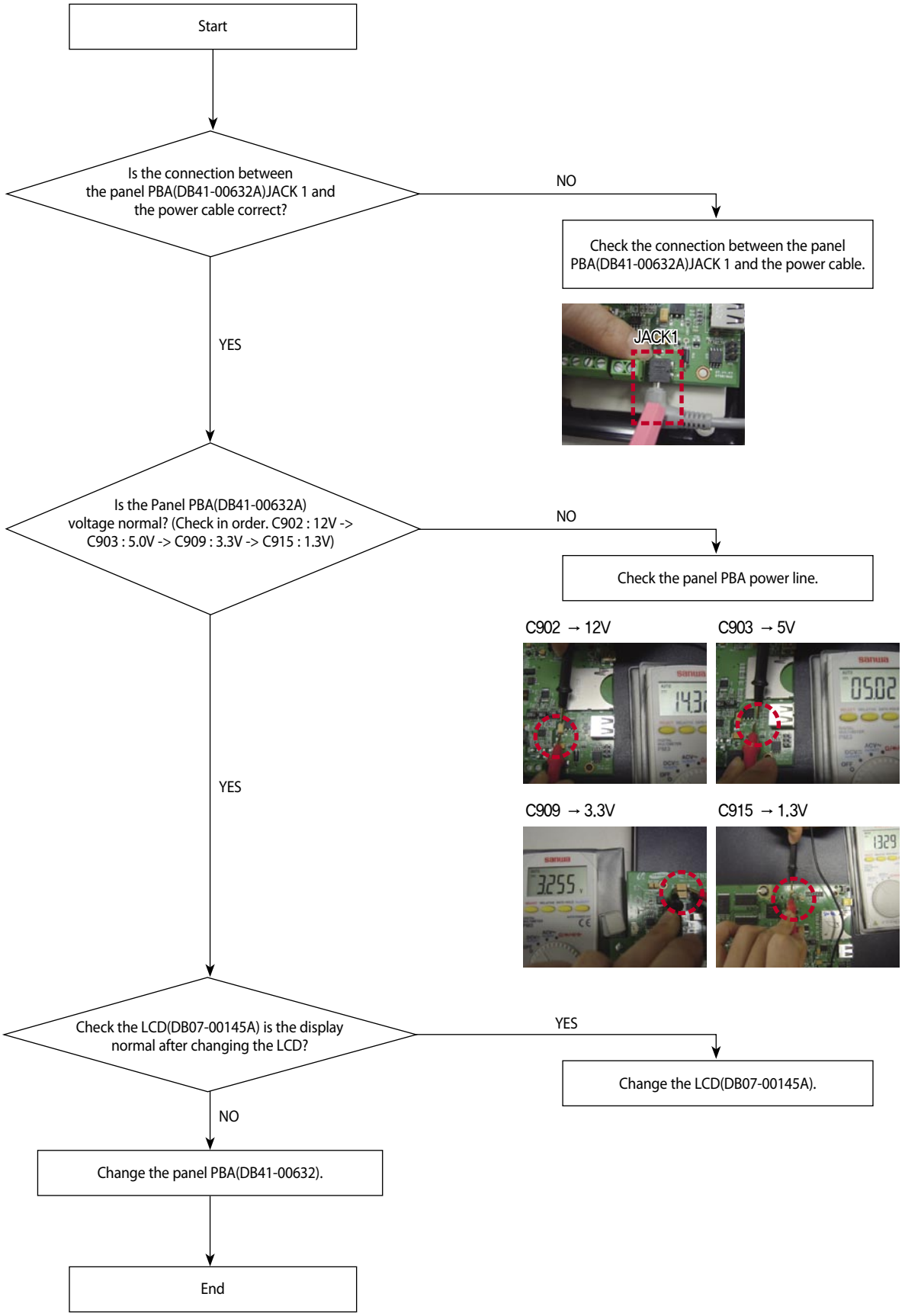
⓯ Close

● **Exit H/W Test.**

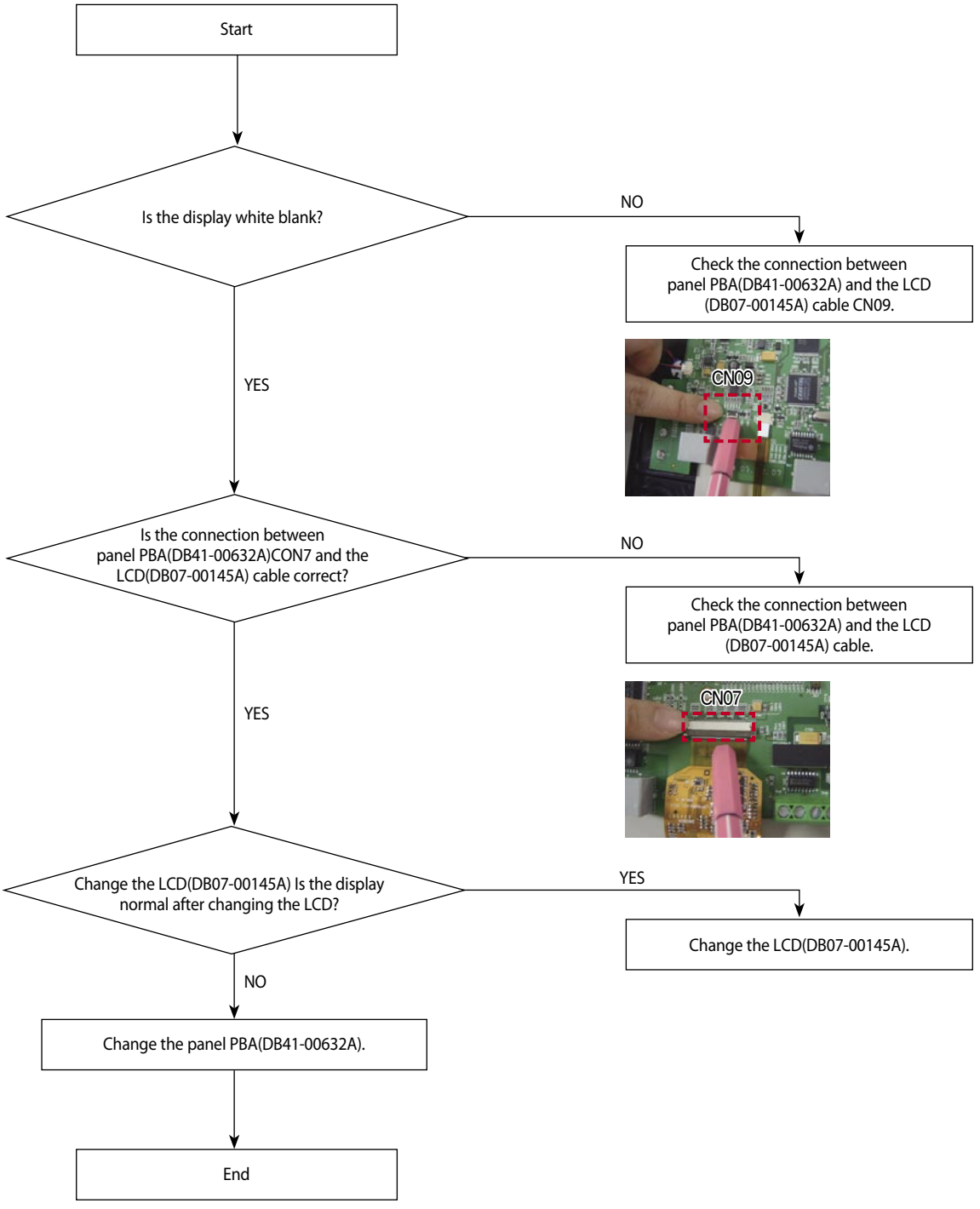
◆ IP address will change to 192.168.0.1 every time you access H/W Test menu.
◆ Set IP Address(button ❷) before closing the H/W Test menu.

4-3. Fault Diagnosis by Symptom

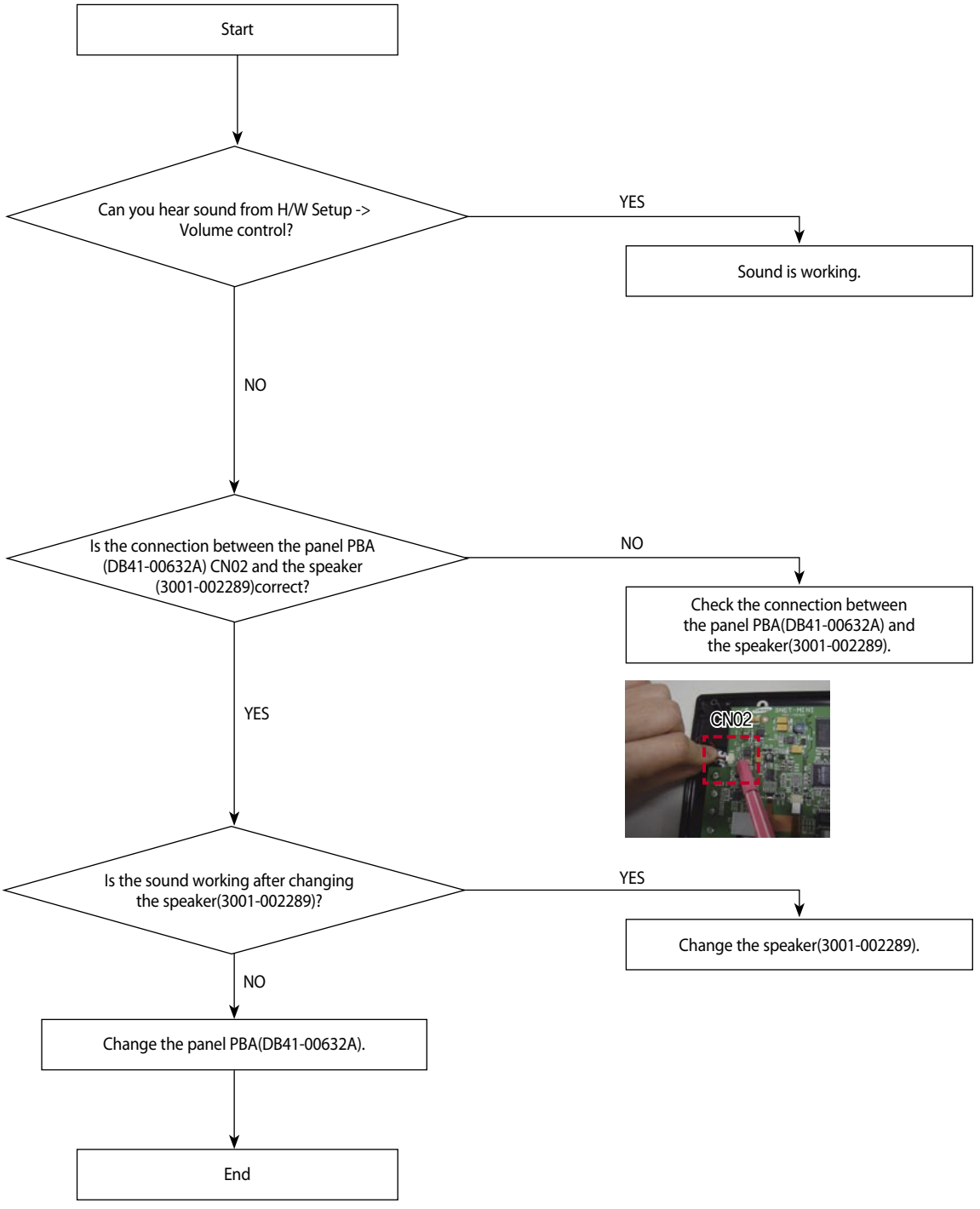
4-3-1. When Adapter Cable is Connected but the Display is Off


Start
Is the connection between the panel PBA(DB41-00632A)JACK 1 and the power cable correct?
NO
Check the connection between the panel PBA(DB41-00632A)JACK 1 and the power cable.
JACK1
YES
Is the Panel PBA(DB41-00632A) voltage normal? (Check in order. C902 : 12V -> C903 : 5.0V -> C909 : 3.3V -> C915 : 1.3V)
NO
Check the panel PBA power line.
C902 → 12V
C903 → 5V
C909 → 3.3V
C915 → 1.3V
YES
Check the LCD(DB07-00145A) is the display normal after changing the LCD?
YES
Change the LCD(DB07-00145A).
NO
Change the panel PBA(DB41-00632).
End

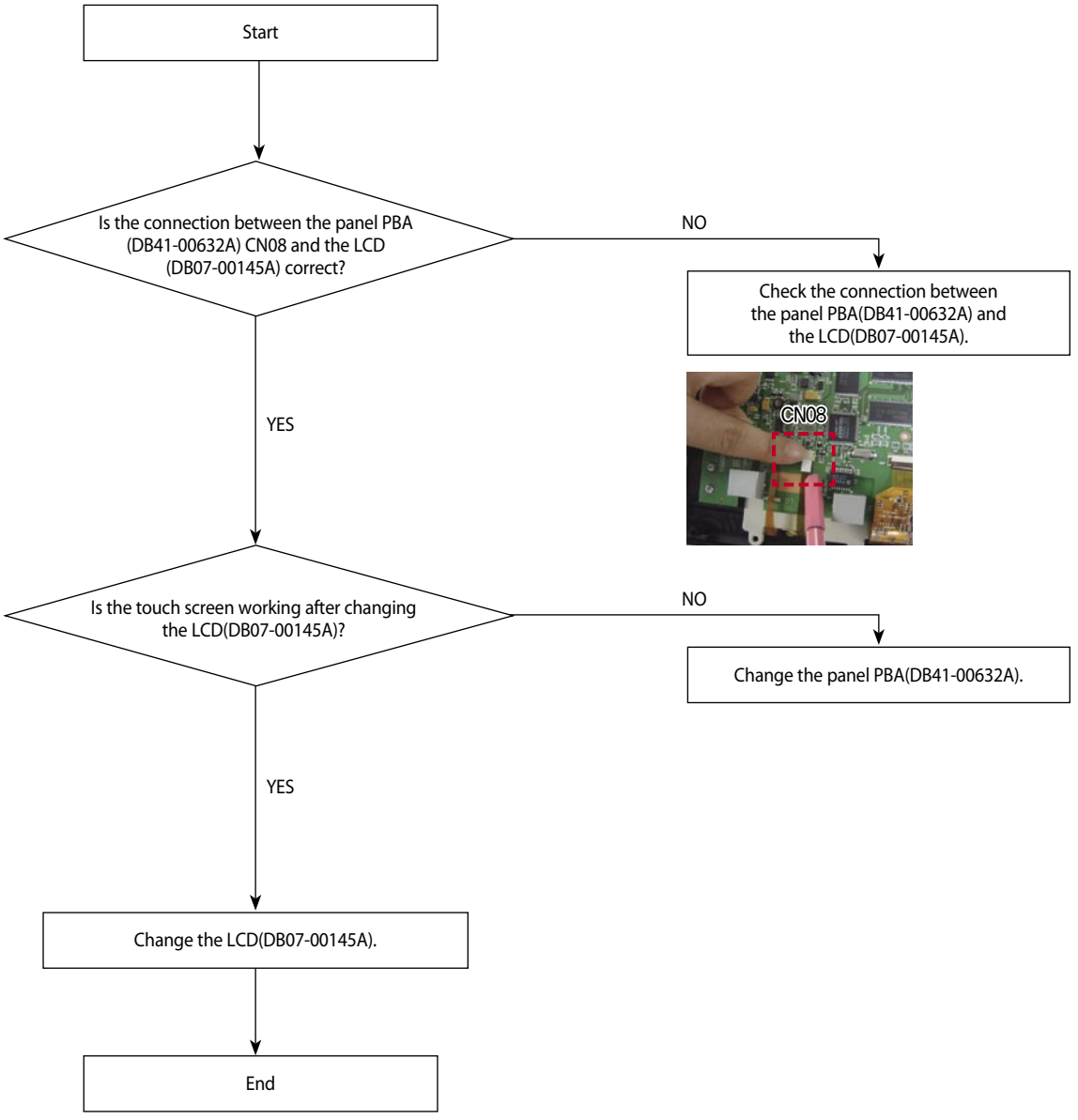
4-3-2. When the Display is Not Working



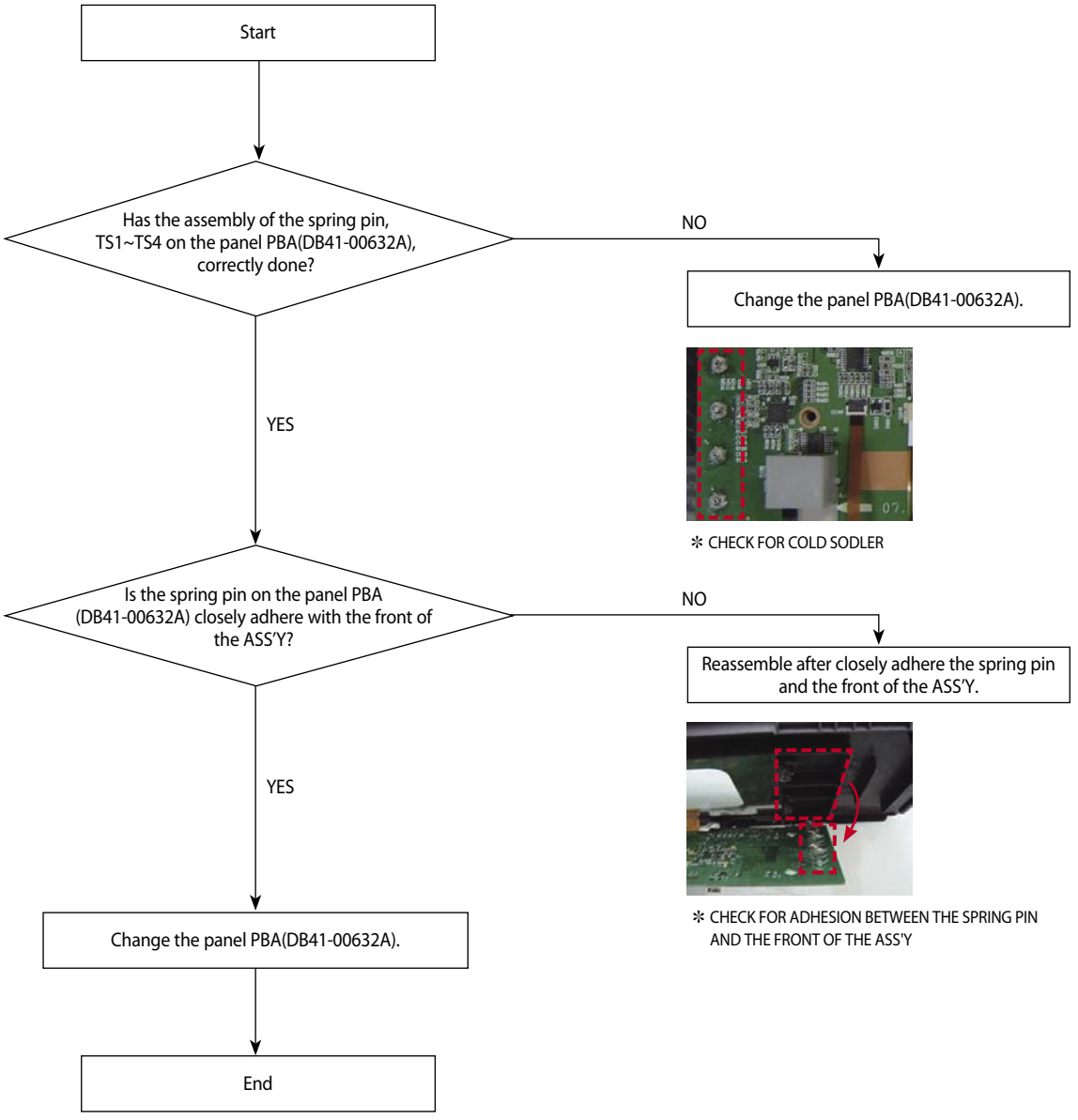
4-3-3. When the Sound is Not Working



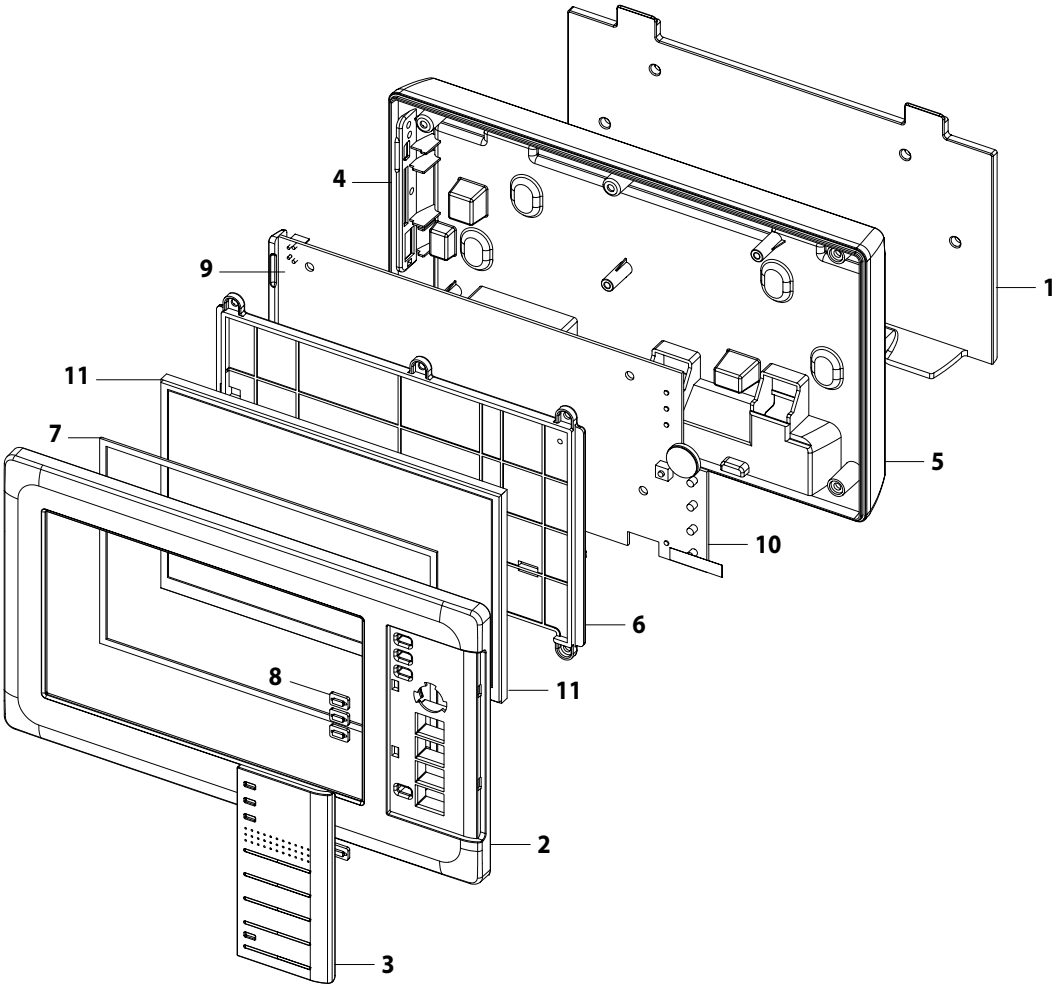
4-3-4. When the Touch Screen is Not Working



4-3-5. When the Buttons are Not Working


Start
Has the assembly of the spring pin, TS1~TS4 on the panel PBA(DB41-00632A), correctly done?
NO
Change the panel PBA(DB41-00632A).
YES
✻ CHECK FOR COLD SODLER
Is the spring pin on the panel PBA (DB41-00632A) closely adhere with the front of the ASS'Y?
NO
Reassemble after closely adhere the spring pin and the front of the ASS'Y.
YES
✻ CHECK FOR ADHESION BETWEEN THE SPRING PIN AND THE FRONT OF THE ASS'Y
Change the panel PBA(DB41-00632A).
End

5. Exploded Views and Parts List

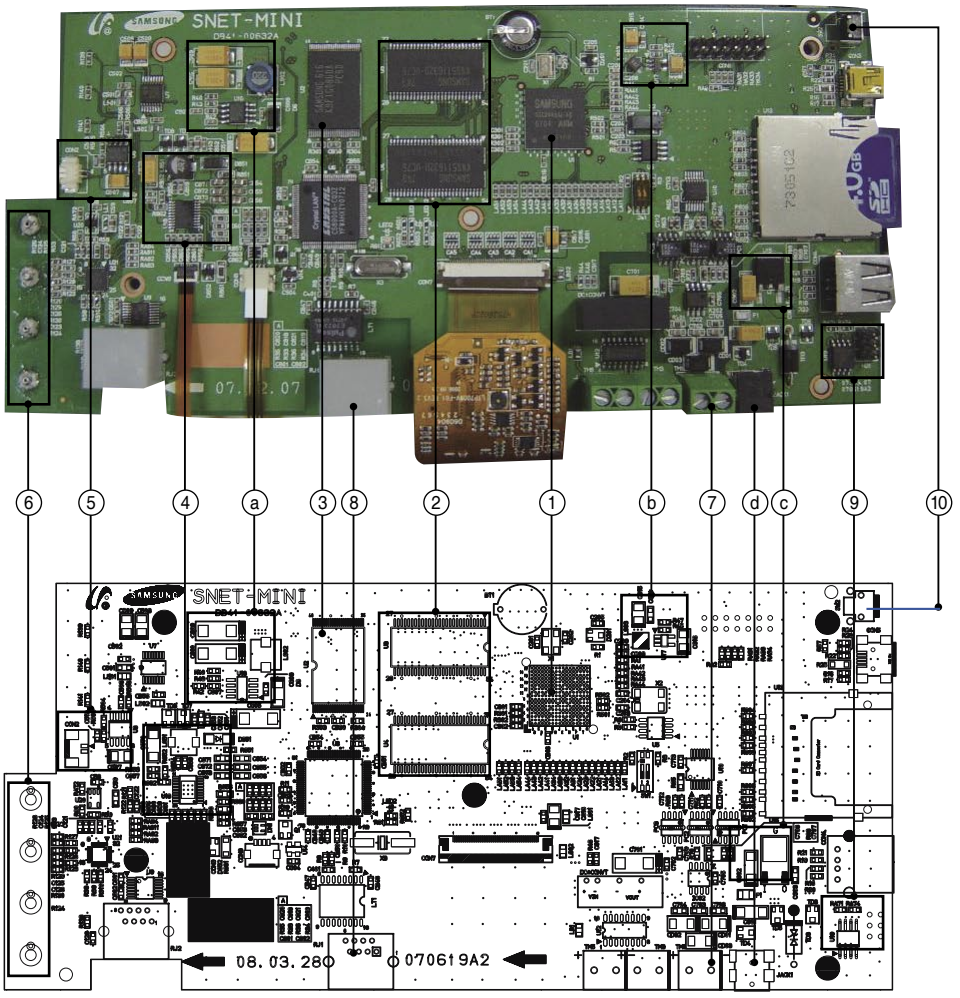


■ **Parts List**

No.	Code No.	Description	Specification	Q'TY	SA/SNA
1	DB61-03636A	BRACKET-REMOCON	ABS,13.6mm,105.9mm,210mm,LIGHT GRAY	1	**SA**
2	DB63-02099A	COVER FRONT	ABS,33mm,135.7mm,229.1mm,CREAM WHITE	1	**SA**
3	DB63-02100A	COVER-CONTROL	ABS,6mm,43.6mm,91.9mm,NEON GRAY	1	**SA**
4	DB63-02101A	COVER-USB	TPE,2.75mm,10.0mm,75.3mm,LIGHT GRAY	1	**SA**
5	DB63-02102A	COVER BACK	ABS,24.7mm,135.7mm,229.1mm,LIGHT GRAY	1	**SA**
6	DB63-02103A	COVER-LCD	ABS,12.2mm,125mm,172mm	1	**SA**
7	DB63-02104A	COVER-GASKET	ABS,1mm,102mm,161.5mm	1	**SA**
8	DB64-02115A	INLAY-LED	PMMA,1.8mm,5.8mm,8.8mm,BLACK SMOG	4	**SA**
9	DB93-05603A	ASSY PCB MAIN-SOLUTION	PCB	1	**SA**
10	DB93-06862A	ASSY-SPEAKER SOLUTION	SPEAKER MODULE	1	**SA**
11	DB96-10751A	ASSY LCD PANEL-SOLUTION	104.2mm,163.2mm,4.8mm,FPC	1	**SA**

6. PCB Diagram and Parts List

6-1. PCB Diagram



① **CPU** S3C2 440-400MHz, Central processing unit	② **SD RAM** Main memory	③ **NAND Flash Memory** Save OS & Application images	④ **LED IC** LCD Backlight control
⑤ **Audio** Create and amplify audio signal	⑥ **Touch Key** Inputs 4 external key on LCD panel	⑦ **485 Communication** 485 Communicate with Centralized controller or Transmitter.	⑧ **Ethernet** Connect to DMS
⑨ **MICOM**	⑩ **Reset Switch** Reset S-NET mini	ⓐ **3.3V Power Line**	ⓑ **1.3V Power Line**
ⓒ **5.0V Power Line**	ⓓ **12.0V External Power supply**		

6-2. Parts List

6-2-1. Main PCB

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
BT1	2409-001109	CAPACITOR-C	0.22F, 5.0V	1	SNA	
C121	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C122	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C123	2203-005076	CAPACITOR-C	470pF, 50V,1608	1	SNA	
C124	2203-001554	CAPACITOR-C	1.8nF, 50V,1608	1	SNA	
C125	2203-005076	CAPACITOR-C	470pF, 50V,1608	1	SNA	
C126	2203-005076	CAPACITOR-C	470pF, 50V,1608	1	SNA	
C129	2203-006199	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C201	2203-005357	CAPACITOR-C	18pF, 50V,1608	1	SNA	
C202	2203-005357	CAPACITOR-C	18pF, 50V,1608	1	SNA	
C203	2203-005357	CAPACITOR-C	18pF, 50V,1608	1	SNA	
C204	2203-005357	CAPACITOR-C	18pF, 50V,1608	1	SNA	
C205	2203-000257	CAPACITOR-C	10nF, 50V,1608	1	SNA	
C206	2203-001126	CAPACITOR-C	0.68nF, 50V,1608	1	SNA	
C207	2203-000125	CAPACITOR-C	1.2nF, 50V,1608	1	SNA	
C208	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C209	2203-000257	CAPACITOR-C	10nF, 50V,1608	1	SNA	
C301	2203-001170	CAPACITOR-C	0.0060nF, 50V,1608	1	SNA	
C302	2203-001170	CAPACITOR-C	0.0060nF, 50V,1608	1	SNA	
C401	2203-001126	CAPACITOR-C	0.68nF, 50V,1608	1	SNA	
C501	2404-001374	CAPACITOR-C	10uF, 16V,2012	1	SNA	
C502	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C503	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C504	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C505	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C506	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C507	2404-001266	CAPACITOR-C	47uF, 10V,3528	1	SNA	
C508	2404-001266	CAPACITOR-C	47uF, 10V,3528	1	SNA	
C509	2404-001266	CAPACITOR-C	47uF, 10V,3528	1	SNA	
C511	2203-001170	CAPACITOR-C	0.0060nF, 50V,1608	1	SNA	
C512	2203-001170	CAPACITOR-C	0.0060nF, 50V,1608	1	SNA	
C513	2203-005357	CAPACITOR-C	18pF, 50V,1608	1	SNA	
C58	2203-006199	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C59	2404-001374	CAPACITOR-C	10uF, 16V,2012	1	SNA	
C601	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C602	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C603	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C604	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C701	2404-000295	CAPACITOR-C	220uF, 10V,7343	1	SNA	
C702	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	

Main PCB (Continued)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
C703	2203-001562	CAPACITOR-C	10nF, 50V,2012	1	SNA	
C704	2203-001562	CAPACITOR-C	10nF, 50V,2012	1	SNA	
C705	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C706	2203-001562	CAPACITOR-C	10nF, 50V,2012	1	SNA	
C707	2203-000888	CAPACITOR-C	4.7nF, 50V,1608	1	SNA	
C708	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C709	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C710	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C711	2203-000888	CAPACITOR-C	4.7nF, 50V,1608	1	SNA	
C712	2203-000888	CAPACITOR-C	4.7nF, 50V,1608	1	SNA	
C713	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C801	2203-005076	CAPACITOR-C	470pF, 50V,1608	1	SNA	
C802	2203-005076	CAPACITOR-C	470pF, 50V,1608	1	SNA	
C803	2203-001170	CAPACITOR-C	0.0060nF, 50V,1608	1	SNA	
C804	2203-005357	CAPACITOR-C	18pF, 50V,1608	1	SNA	
C816	2404-001266	CAPACITOR-C	47uF, 10V,3528	1	SNA	
C817	2203-000257	CAPACITOR-C	10nF, 50V,1608	1	SNA	
C818	2203-000257	CAPACITOR-C	10nF, 50V,1608	1	SNA	
C819	2203-000257	CAPACITOR-C	10nF, 50V,1608	1	SNA	
C820	2203-000257	CAPACITOR-C	10nF, 50V,1608	1	SNA	
C821	2203-000257	CAPACITOR-C	10nF, 50V,1608	1	SNA	
C851	2203-000440	CAPACITOR-C	1nF, 50V,1608	1	SNA	
C852	2203-001878	CAPACITOR-C	1uF, 50V,2012	1	SNA	
C853	2203-006199	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C854	2203-005774	CAPACITOR-C	1000nF, 50V,2012	1	SNA	
C855	2203-005774	CAPACITOR-C	1000nF, 50V,2012	1	SNA	
C856	2203-005774	CAPACITOR-C	1000nF, 50V,2012	1	SNA	
C857	2203-000257	CAPACITOR-C	10nF, 50V,1608	1	SNA	
C858	2203-000440	CAPACITOR-C	1nF, 50V,1608	1	SNA	
C859	2203-000440	CAPACITOR-C	1nF, 50V,1608	1	SNA	
C860	2203-000440	CAPACITOR-C	1nF, 50V,1608	1	SNA	
C861	2203-000440	CAPACITOR-C	1nF, 50V,1608	1	SNA	
C862	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C863	2203-006496	CAPACITOR-C	2.2nF, 50V,1608	1	SNA	
C864	2203-006496	CAPACITOR-C	2.2nF, 50V,1608	1	SNA	
C865	2203-000062	CAPACITOR-C	47nF, 50V,1608	1	SNA	
C870	2404-001035	CAPACITOR-C	10uF, 25V,6032	1	SNA	
C871	2203-005774	CAPACITOR-C	1000nF, 50V,2012	1	SNA	
C872	2203-005774	CAPACITOR-C	1000nF, 50V,2012	1	SNA	
C873	2203-005774	CAPACITOR-C	1000nF, 50V,2012	1	SNA	

Main PCB (Continued)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
C901	2404-001035	CAPACITOR-C	10uF, 25V,6032	1	SNA	
C902	2404-001035	CAPACITOR-C	10uF, 25V,6032	1	SNA	
C903	2404-001374	CAPACITOR-C	10uF, 16V,2012	1	SNA	
C904	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C905	2404-001519	CAPACITOR-C	47uF, 25V	1	SNA	
C907	2203-000888	CAPACITOR-C	4.7nF, 50V,1608	1	SNA	
C908	2203-000257	CAPACITOR-C	10nF, 50V,1608	1	SNA	
C909	2404-000295	CAPACITOR-C	220uF, 10V,7343	1	SNA	
C910	2404-000295	CAPACITOR-C	220uF, 10V,7343	1	SNA	
C914	2404-001374	CAPACITOR-C	10uF, 16V,2012	1	SNA	
C915	2404-001266	CAPACITOR-C	47uF, 10V,3528	1	SNA	
C916	2404-001266	CAPACITOR-C	47uF, 10V,3528	1	SNA	
C917	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
C920	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB1	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB10	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB11	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB12	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB13	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB14	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB15	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB16	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB17	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB18	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB19	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB2	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB20	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB21	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB22	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB23	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB24	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB25	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB26	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB27	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB28	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB29	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB3	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB30	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB31	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB32	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	

Main PCB (Continued)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
CB33	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB34	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB35	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB36	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB37	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB38	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB39	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB4	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB40	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB41	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB42	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB43	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB44	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB45	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB46	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB47	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB48	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB49	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB5	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB50	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB51	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB52	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB53	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB54	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB55	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB56	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB57	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB6	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB64	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB65	2404-001266	CAPACITOR-C	47uF, 10V,3528	1	SNA	
CB66	2404-001266	CAPACITOR-C	47uF, 10V,3528	1	SNA	
CB67	2404-001266	CAPACITOR-C	47uF, 10V,3528	1	SNA	
CB68	2404-001266	CAPACITOR-C	47uF, 10V,3528	1	SNA	
CB7	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB8	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CB9	2203-005249	CAPACITOR-C	100nF, 50V,1608	1	SNA	
CD01	0406-001204	DIODE-D	SMBJ5.0CA	1	SNA	
CD02	0406-001204	DIODE-D	SMBJ5.0CA	1	SNA	
CD03	0406-001204	DIODE-D	SMBJ5.0CA	1	SNA	
CON2	3711-000541	CN-Connector	12505WR-02A00	1	SNA	

Main PCB (Continued)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
CON4	3722-001051	JUMPER	UAR27-4K5300, BLK	1	SNA	
CON5	3722-002236	JUMPER	MNE20-5K5P10	1	SNA	
CON7	3708-001331	JUMPER	05002HR-40A01	1	SNA	
CON8	3708-002018	JUMPER	10019HR-04A00	1	SNA	
CON9	3708-002015	CN- Connector	04-6298-006-000-883	1	SNA	
D201	0404-001020	D- Diode	BAT54C	1	SNA	
D6	0402-001110	DIODE-D	B240, 40V/2A	1	SNA	
D851	0402-001097	DIODE-D	B140, 40V/1000mA	1	SNA	
D852	0404-001020	D- Diode	BAT54C	1	SNA	
DC_CONVT	4401-001299	BP TRANSISTOR -Q	SPR01L-05	1	SNA	
DN1	0406-001084	DIODE-D	SMF05	1	SNA	
F1	3601-001395	BD-Bridge Diode	3216FF-1A	1	SNA	
IC02	1006-001371	IC- IC	ISL3175EIBZ	1	SNA	
JACK1	3722-002215	JUMPER	TDC-016	1	SNA	
L501	3301-001120	RESISTOR -R	30ohm, 2012	1	SNA	
L502	3301-001120	RESISTOR -R	30ohm, 2012	1	SNA	
L801	3301-001120	RESISTOR -R	30ohm, 2012	1	SNA	
L802	3301-001120	RESISTOR -R	30ohm, 2012	1	SNA	
L851	2703-002297	INDUCTOR -L	4.7uH	1	SNA	
L902	2703-000414	INDUCTOR -L	22uH	1	SNA	
L903	2703-000122	INDUCTOR -L	10uH	1	SNA	
LA11	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA12	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA13	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA14	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA21	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA22	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA23	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA24	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA31	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA32	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA33	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA34	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA41	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA42	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA43	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA44	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA51	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA52	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LA53	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	

Main PCB (Continued)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
LA54	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
LB1	3301-001120	RESISTOR -R	30ohm, 2012	1	SNA	
LED2	0601-001785	LED	472NM,1608, BLU	1	SNA	
LED5	0601-001785	LED	472NM,1608, BLU	1	SNA	
LED6	0601-001785	LED	472NM,1608, BLU	1	SNA	
LED7	0601-001785	LED	472NM,1608, BLU	1	SNA	
LED8	0601-001785	LED	472NM,1608, BLU	1	SNA	
LT1	2603-000059	TRANSMISSION LINE -T	E2023	1	SNA	
PC1	0604-001173	DEFAULT LOGIC	HCPL-0201, 210mW	1	SNA	
PC2	0604-001173	DEFAULT LOGIC	HCPL-0201, 210mW	1	SNA	
PC3	0604-001173	DEFAULT LOGIC	HCPL-0201, 210mW	1	SNA	
Q1	0505-000110	DEFAULT LOGIC	2N7002, 60V	1	SNA	
R1	2007-000076	RESISTOR -R	330-J, 1/10W,1608	1	SNA	
R10	2007-007549	RESISTOR -R	4.99K-F, 1/10W	1	SNA	
R11	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R121	2007-000091	RESISTOR -R	12K-J, 1/10W,1608	1	SNA	
R122	2007-000094	RESISTOR -R	22Kohm, 1/10W,1608	1	SNA	
R123	2007-000070	RESISTOR -R	0-J, 1/10W,1608	1	SNA	
R124	2007-000091	RESISTOR -R	12K-J, 1/10W,1608	1	SNA	
R125	2007-000070	RESISTOR -R	0-J, 1/10W,1608	1	SNA	
R126	2007-000091	RESISTOR -R	12K-J, 1/10W,1608	1	SNA	
R127	2007-000070	RESISTOR -R	0-J, 1/10W,1608	1	SNA	
R128	2007-000070	RESISTOR -R	0-J, 1/10W,1608	1	SNA	
R129	2007-000091	RESISTOR -R	12K-J, 1/10W,1608	1	SNA	
R130	2007-000091	RESISTOR -R	12K-J, 1/10W,1608	1	SNA	
R138	2007-000116	RESISTOR -R	120-J, 1/10W,1608	1	SNA	
R139	2007-000116	RESISTOR -R	120-J, 1/10W,1608	1	SNA	
R140	2007-000116	RESISTOR -R	120-J, 1/10W,1608	1	SNA	
R141	2007-000116	RESISTOR -R	120-J, 1/10W,1608	1	SNA	
R16	2007-000124	RESISTOR -R	2.2K-J, 1/10W,1608	1	SNA	
R17	2007-000082	RESISTOR -R	3.3K-J, 1/10W,1608	1	SNA	
R18	2007-000071	RESISTOR -R	22-J, 1/10W,1608	1	SNA	
R19	2007-000071	RESISTOR -R	22-J, 1/10W,1608	1	SNA	
R2	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R20	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R21	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R22	2007-000071	RESISTOR -R	22-J, 1/10W,1608	1	SNA	
R23	2007-000071	RESISTOR -R	22-J, 1/10W,1608	1	SNA	
R24	2007-000124	RESISTOR -R	2.2K-J, 1/10W,1608	1	SNA	
R25	2007-000927	RESISTOR -R	470K-J, 1/4W,3216	1	SNA	

Main PCB (Continued)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
R29	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R3	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R30	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R301	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R302	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R303	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R304	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R31	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R32	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R33	2007-000070	RESISTOR -R	0-J, 1/10W,1608	1	SNA	
R34	2007-000070	RESISTOR -R	0-J, 1/10W,1608	1	SNA	
R35	2007-000070	RESISTOR -R	0-J, 1/10W,1608	1	SNA	
R36	2007-000070	RESISTOR -R	0-J, 1/10W,1608	1	SNA	
R37	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R38	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R39	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R40	2007-000098	RESISTOR -R	56K-J, 1/10W,1608	1	SNA	
R42	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R43	2007-000134	RESISTOR -R	33K-J, 1/10W,1608	1	SNA	
R45	2007-000133	RESISTOR -R	330K-J, 1/10W,1608	1	SNA	
R46	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R47	2007-000637	RESISTOR -R	270K-J, 1/10W,1608	1	SNA	
R5	2007-000078	RESISTOR -R	1K-J, 1/10W,1608	1	SNA	
R501	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R502	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R503	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R504	2007-000094	RESISTOR -R	22Kohm, 1/10W,1608	1	SNA	
R505	2007-000098	RESISTOR -R	56K-J, 1/10W,1608	1	SNA	
R506	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R57	2007-000078	RESISTOR -R	1K-J, 1/10W,1608	1	SNA	
R59	2007-000106	RESISTOR -R	220K-J, 1/10W,1608	1	SNA	
R6	2007-000078	RESISTOR -R	1K-J, 1/10W,1608	1	SNA	
R60	2007-000133	RESISTOR -R	330K-J, 1/10W,1608	1	SNA	
R61	2007-000077	RESISTOR -R	470-J, 1/10W,1608	1	SNA	
R62	2007-000078	RESISTOR -R	1K-J, 1/10W,1608	1	SNA	
R63	2007-000078	RESISTOR -R	1K-J, 1/10W,1608	1	SNA	
R65	2007-000300	RESISTOR -R	10K-J, 1/8W,2012	1	SNA	
R652	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R68	2007-000078	RESISTOR -R	1K-J, 1/10W,1608	1	SNA	
R7	2007-000074	RESISTOR -R	100-J, 1/10W,1608	1	SNA	

Main PCB (Continued)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
R70	2007-000078	RESISTOR -R	1K-J, 1/10W,1608	1	SNA	
R8	2007-000112	RESISTOR -R	8.2-J, 1/10W,1608	1	SNA	
R801	2007-000570	RESISTOR -R	220-F, 1/10W,1608	1	SNA	
R802	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R803	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R804	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R805	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R806	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R807	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R808	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R809	2007-000113	RESISTOR -R	33-J, 1/10W,1608	1	SNA	
R810	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R811	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R812	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R813	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R814	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R851	2007-000604	RESISTOR -R	240K-J, 1/10W,1608	1	SNA	
R852	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R853	2007-000090	RESISTOR -R	10K-J, 1/10W,1608	1	SNA	
R854	2007-007992	RESISTOR -R	1-F, 1/10W,1608	1	SNA	
R855	2007-007992	RESISTOR -R	1-F, 1/10W,1608	1	SNA	
R856	2007-000406	RESISTOR -R	15K-F, 1/8W,2012	1	SNA	
R857	2007-000406	RESISTOR -R	15K-F, 1/8W,2012	1	SNA	
R858	2007-007992	RESISTOR -R	1-F, 1/10W,1608	1	SNA	
R859	2007-007992	RESISTOR -R	1-F, 1/10W,1608	1	SNA	
R860	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
R861	2007-000927	RESISTOR -R	470K-J, 1/4W,3216	1	SNA	
R862	2007-000070	RESISTOR -R	0-J, 1/10W,1608	1	SNA	
R9	2007-000112	RESISTOR -R	8.2-J, 1/10W,1608	1	SNA	
RA1	2007-000074	RESISTOR -R	100-J, 1/10W,1608	1	SNA	
RA2	2007-000070	RESISTOR -R	0-J, 1/10W,1608	1	SNA	
RA31	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA32	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA33	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA34	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA41	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA42	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA43	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA44	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA71	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	

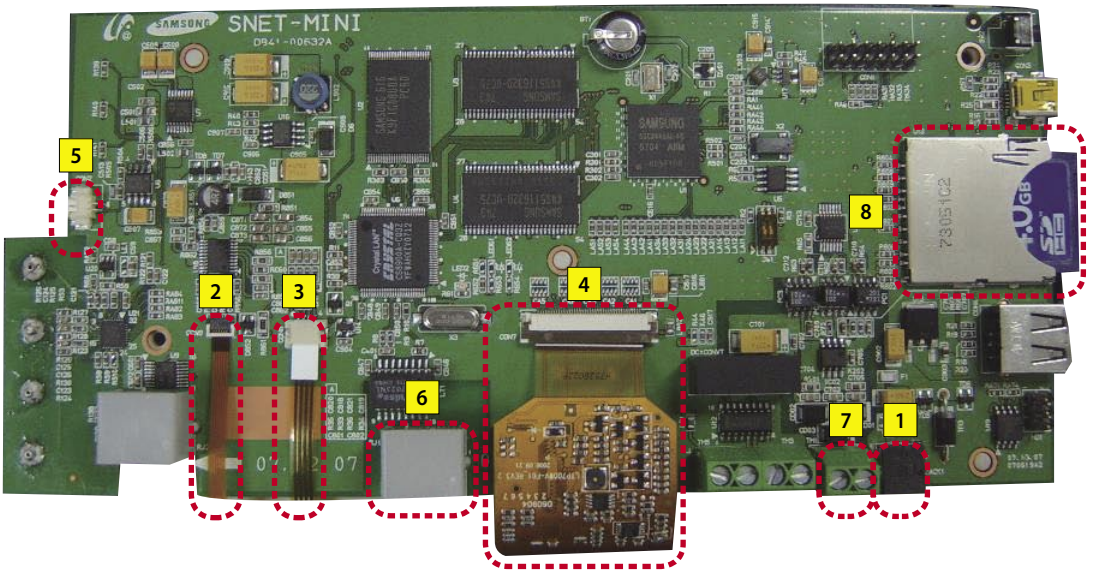
Main PCB (Continued)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
RA72	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA74	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA75	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA811	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA82	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA83	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RA84	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RB5	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RB6	2007-000084	RESISTOR -R	4.7K-J, 1/10W,1608	1	SNA	
RJ1	3722-001877	JUMPER	RJ45-8, GRY	1	SNA	
RJ2	3722-001877	JUMPER	RJ45-8, GRY	1	SNA	
RS10	2007-000065	RESISTOR -R	2.2M-J, 1/10W,1608	1	SNA	
RS2	2007-000065	RESISTOR -R	2.2M-J, 1/10W,1608	1	SNA	
RS3	2007-000065	RESISTOR -R	2.2M-J, 1/10W,1608	1	SNA	
RS4	2007-000065	RESISTOR -R	2.2M-J, 1/10W,1608	1	SNA	
RS6	2007-000065	RESISTOR -R	2.2M-J, 1/10W,1608	1	SNA	
RS7	2007-000065	RESISTOR -R	2.2M-J, 1/10W,1608	1	SNA	
RS8	2007-000065	RESISTOR -R	2.2M-J, 1/10W,1608	1	SNA	
RS9	2007-000065	RESISTOR -R	2.2M-J, 1/10W,1608	1	SNA	
SW1	3407-000183	D- Photo Diode	KHS02C	1	SNA	
SW2	3404-001237	D- Photo Diode	JTP1236L, 12V/50MA	1	SNA	
TD3	0406-001007	DIODE-D	P6KE180A, 600W	1	SNA	
TD4	0406-001021	DIODE-D	SM15, 15V/500W	1	SNA	
TD5	0406-001021	DIODE-D	SM15, 15V/500W	1	SNA	
TD6	0406-001021	DIODE-D	SM15, 15V/500W	1	SNA	
TD7	0406-001021	DIODE-D	SM15, 15V/500W	1	SNA	
TD8	0406-001021	DIODE-D	SM15, 15V/500W	1	SNA	
TM1	DB65-00157A	JUMPER	AKZ230-2P, GRN	1	SNA	
TM3	DB65-00157A	JUMPER	AKZ230-2P, GRN	1	SNA	
TM5	DB65-00157A	JUMPER	AKZ230-2P, GRN	1	SNA	
TS01	DB61-03600A	D- Photo Diode	SWP-B	1	SNA	
TS02	DB61-03600A	D- Photo Diode	SWP-B	1	SNA	
TS03	DB61-03600A	D- Photo Diode	SWP-B	1	SNA	
TS04	DB61-03600A	D- Photo Diode	SWP-B	1	SNA	
TVS61	0406-001239	DIODE-D	RClamp0502B	1	SNA	
TVS62	0406-001239	DIODE-D	RClamp0502B	1	SNA	
TVS71	0406-001239	DIODE-D	RClamp0502B	1	SNA	
TVS81	0406-001239	DIODE-D	RClamp0502B	1	SNA	
TVS82	0406-001239	DIODE-D	RClamp0502B	1	SNA	
TVS83	0406-001239	DIODE-D	RClamp0502B	1	SNA	

Main PCB (Continued)

Location No.	Code No.	Description	Specification	Q'TY	SA/SNA	Remark
TVS84	0406-001239	DIODE-D	RClamp0502B	1	SNA	
U1	0902-002112	DEFAULT LOGIC	S3C2440A, FBGA	1	SNA	
U10	0801-002635	DEFAULT LOGIC	74LVC07A	1	SNA	
U12	0506-000175	DEFAULT LOGIC	ULN2003D013TR, 1W	1	SNA	
U13	3709-001385	JUMPER	SDC009-C0-1F50	1	SNA	
U14	1203-001933	DIODE-D	MAX811	1	SNA	
U15	1203-002390	DEFAULT LOGIC	KA7805R	1	SNA	
U16	1203-003059	IC- IC	MP1583DN	1	SNA	
U17	1203-003803	DEFAULT LOGIC	MP2104DJ	1	SNA	
U18	1203-004472	BP TRANSISTOR -Q	SC441TETRT	1	SNA	
U19	DB91-00563A	DEFAULT LOGIC	SNET-mini-reset, SMT-0745-OS	1	SNA	
U2	1107-001341	DEFAULT LOGIC	K9F1G08U0	1	SNA	
U20	1203-001256	DEFAULT LOGIC	MIC5205-3.3BM5	1	SNA	
U21	DB32-00188A	DEFAULT LOGIC	QT1081	1	SNA	
U3	1105-001551	DEFAULT LOGIC	K4S511632	1	SNA	
U4	1105-001551	DEFAULT LOGIC	K4S511632	1	SNA	
U5	1103-000138	DEFAULT LOGIC	AT24C16	1	SNA	
U6	1205-002222	DEFAULT LOGIC	CS8900A-IQ3	1	SNA	
U7	1002-001124	IC- IC	UDA1330ATS	1	SNA	
U8	1201-002728	DEFAULT LOGIC	LM4861M	1	SNA	
U9	1006-001154	DEFAULT LOGIC	MAX3232	1	SNA	
X1	2801-004478	X- X-tal	16.9344MHz, 30ppm/SMD	1	SNA	
X2	2801-000258	X- X-tal	32.768KHz, 20ppm/SMD	1	SNA	
X3	2801-004131	X- X-tal	20MHZ, 50PPM	1	SNA	

7. Wiring Diagram



#1	Power connector
#2	LCD ASS'Y cable – LED Backlight
#3	LCD ASS'Y cable – Touch screen
#4	LCD ASS'Y cable – RGB Data
#5	Speaker connector
#6	LAN Port connector
#7	485 Communication terminal connector
#8	SD Card socket

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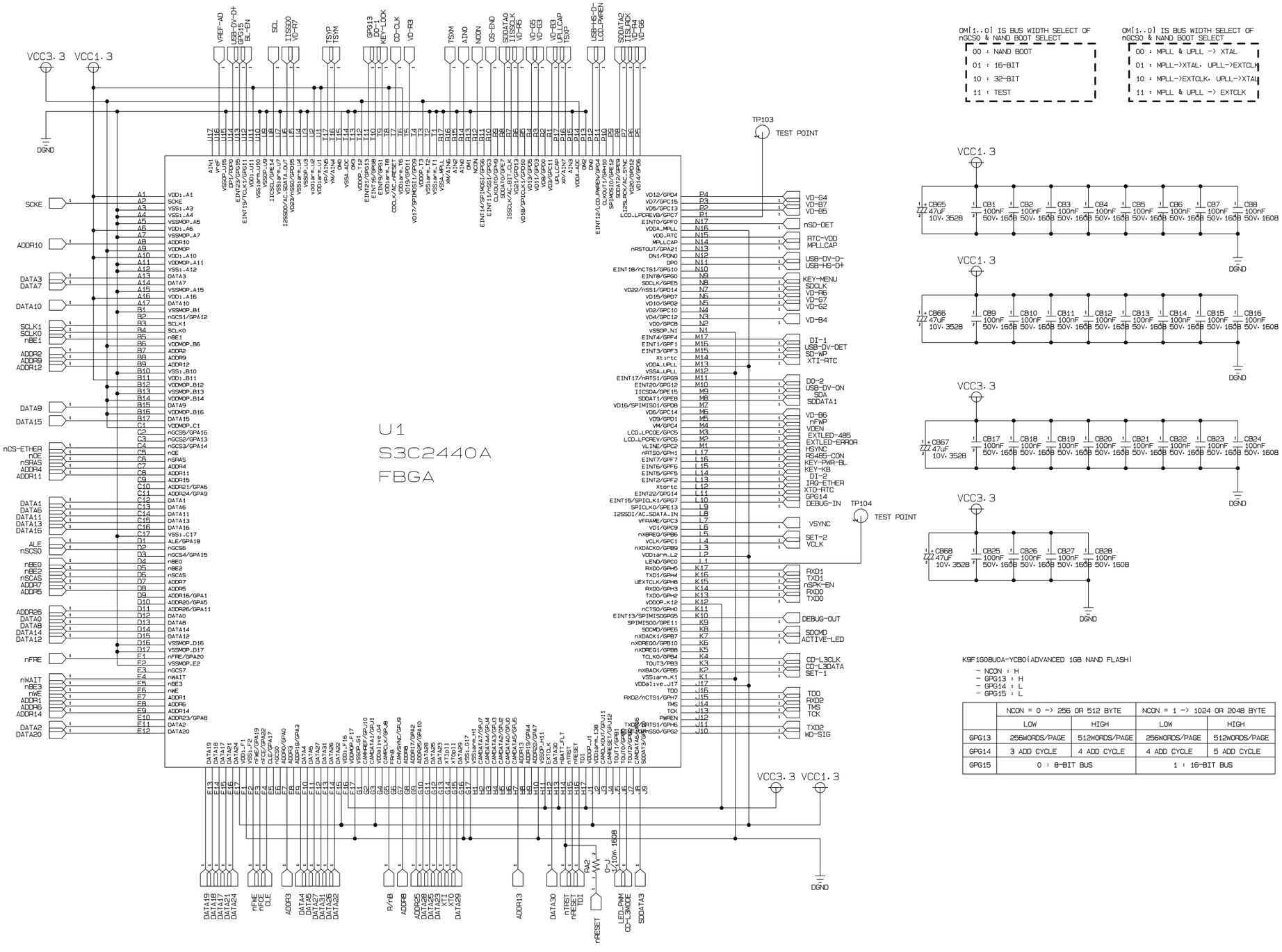
8. Schematic Diagram


OM[1..0] IS BUS WIDTH SELECT OF nGCS0 & NAND BOOT SELECT
00 : NAND BOOT
01 : 16-BIT
10 : 32-BIT
11 : TEST
OM[1..0] IS BUS WIDTH SELECT OF nGCS0 & NAND BOOT SELECT
00 : MPLL & UPLL -> XTAL
01 : MPLL->XTAL, UPLL->EXTCLK
10 : MPLL->EXTCLK, UPLL->XTAL
11 : MPLL & UPLL -> EXTCLK
U1
S3C2440A
FBGA
TP103
TEST POINT
TP104
TEST POINT
VCC3.3
VCC1.3
DGND
K9F1G08U0A-YCB0(ADVANCED 1GB NAND FLASH)
- NCON : H
- GPG13 : H
- GPG14 : L
- GPG15 : L
NCON = 0 -> 256 OR 512 BYTE
NCON = 1 -> 1024 OR 2048 BYTE
LOW
HIGH
GPG13 256WORDS/PAGE 512WORDS/PAGE 256WORDS/PAGE 512WORDS/PAGE
GPG14 3 ADD CYCLE 4 ADD CYCLE 4 ADD CYCLE 5 ADD CYCLE
GPG15 0 : 8-BIT BUS 1 : 16-BIT BUS

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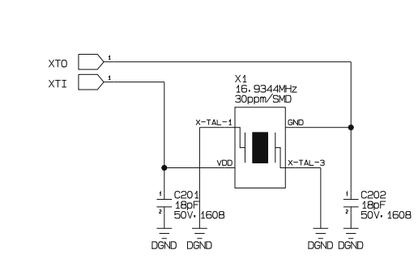
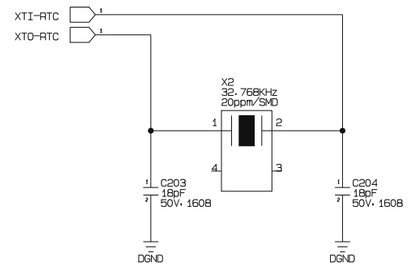
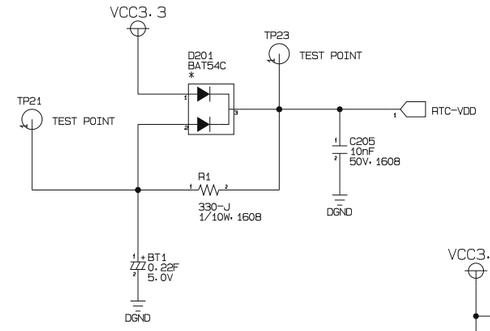
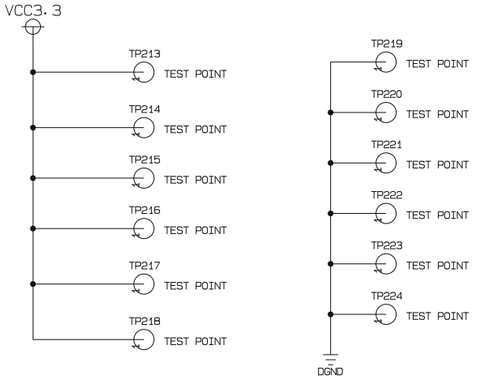
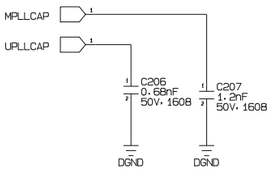
Schematic Diagram (Continued)

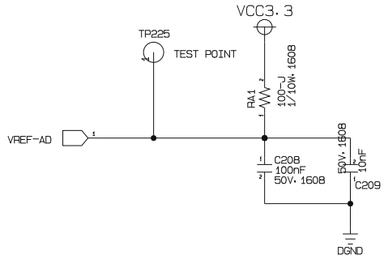


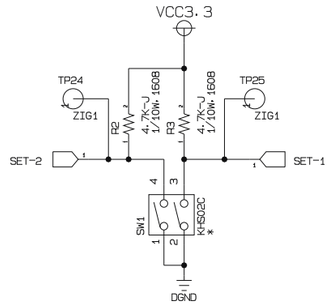


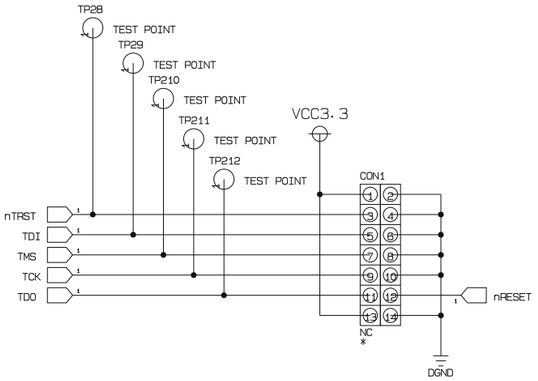


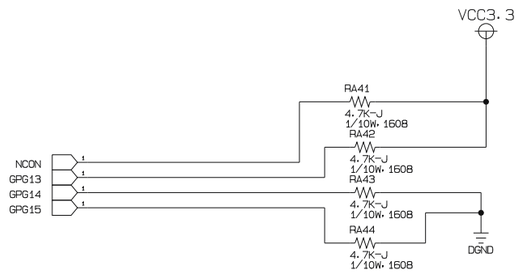


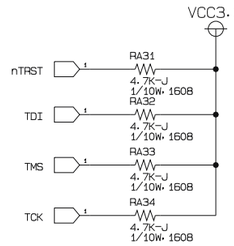


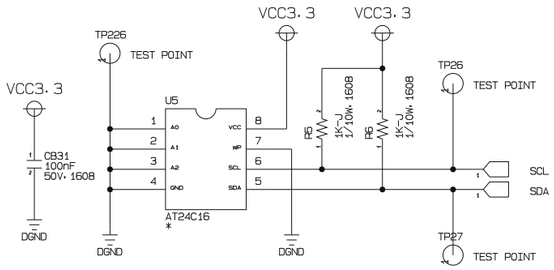












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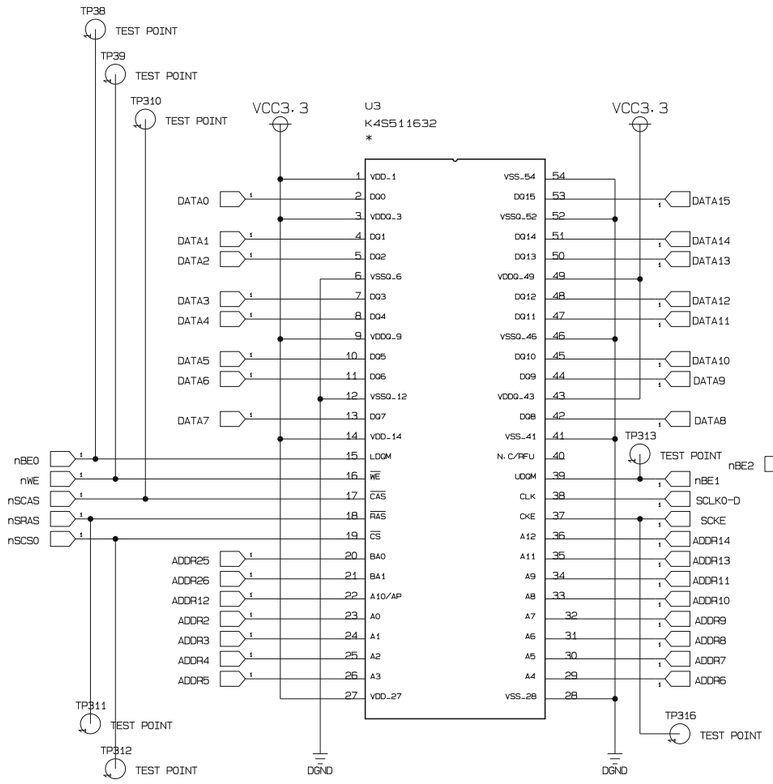

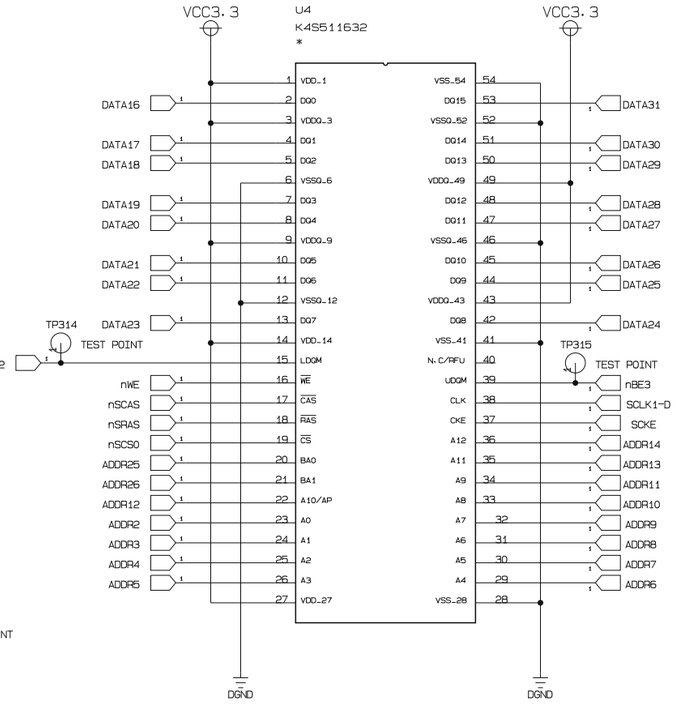

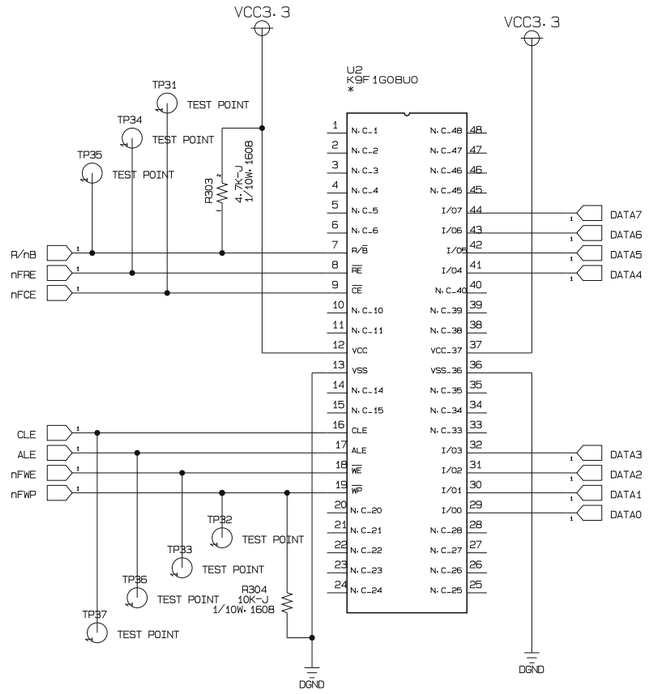

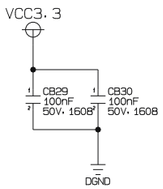

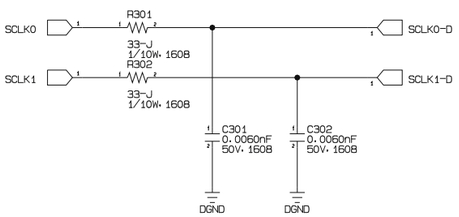

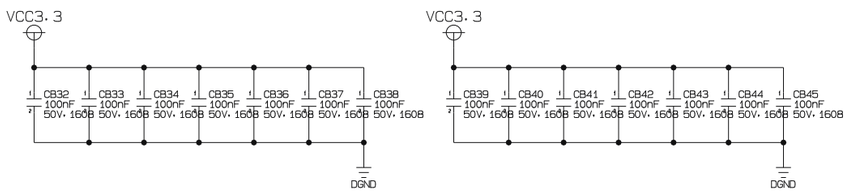

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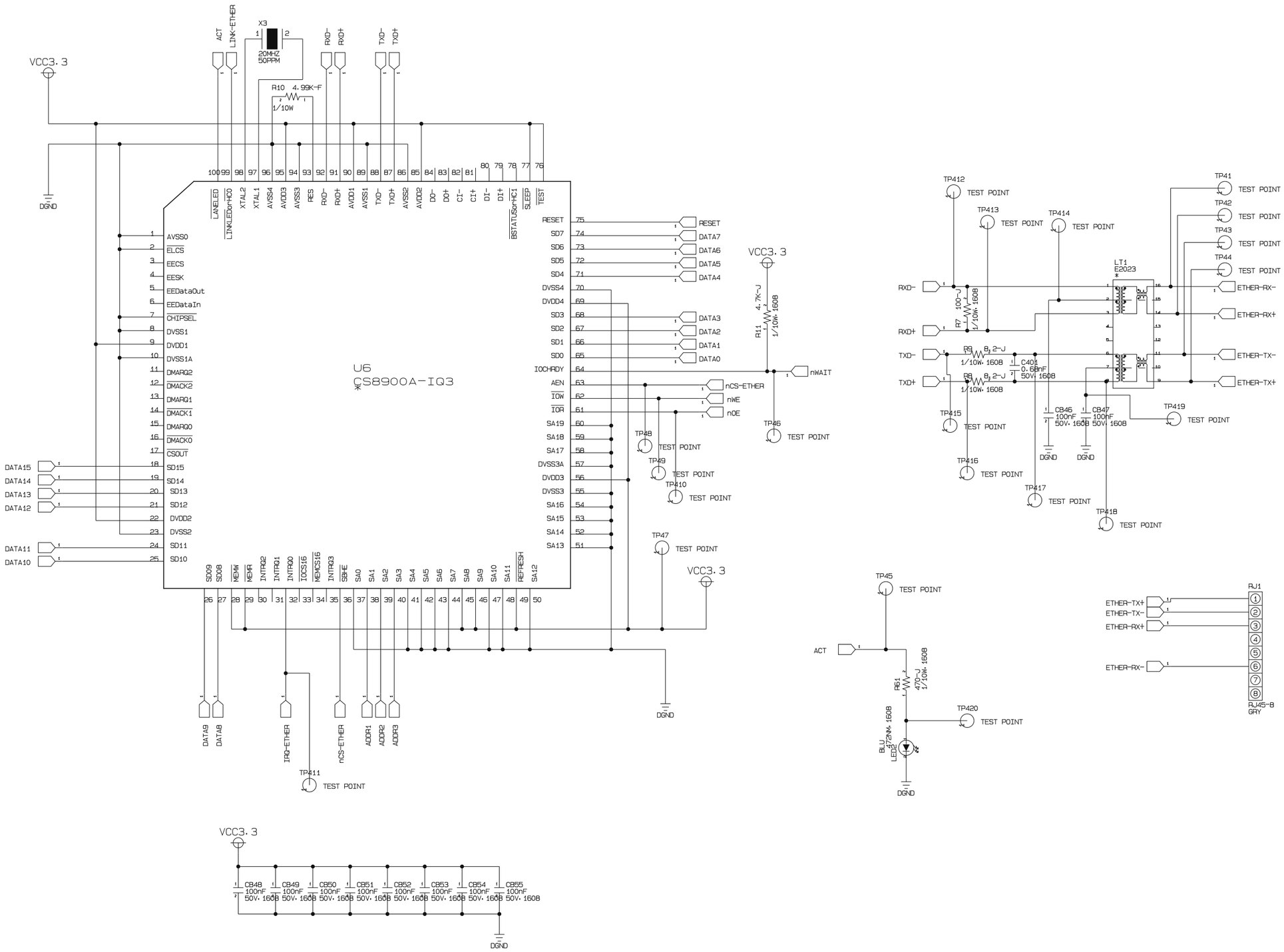

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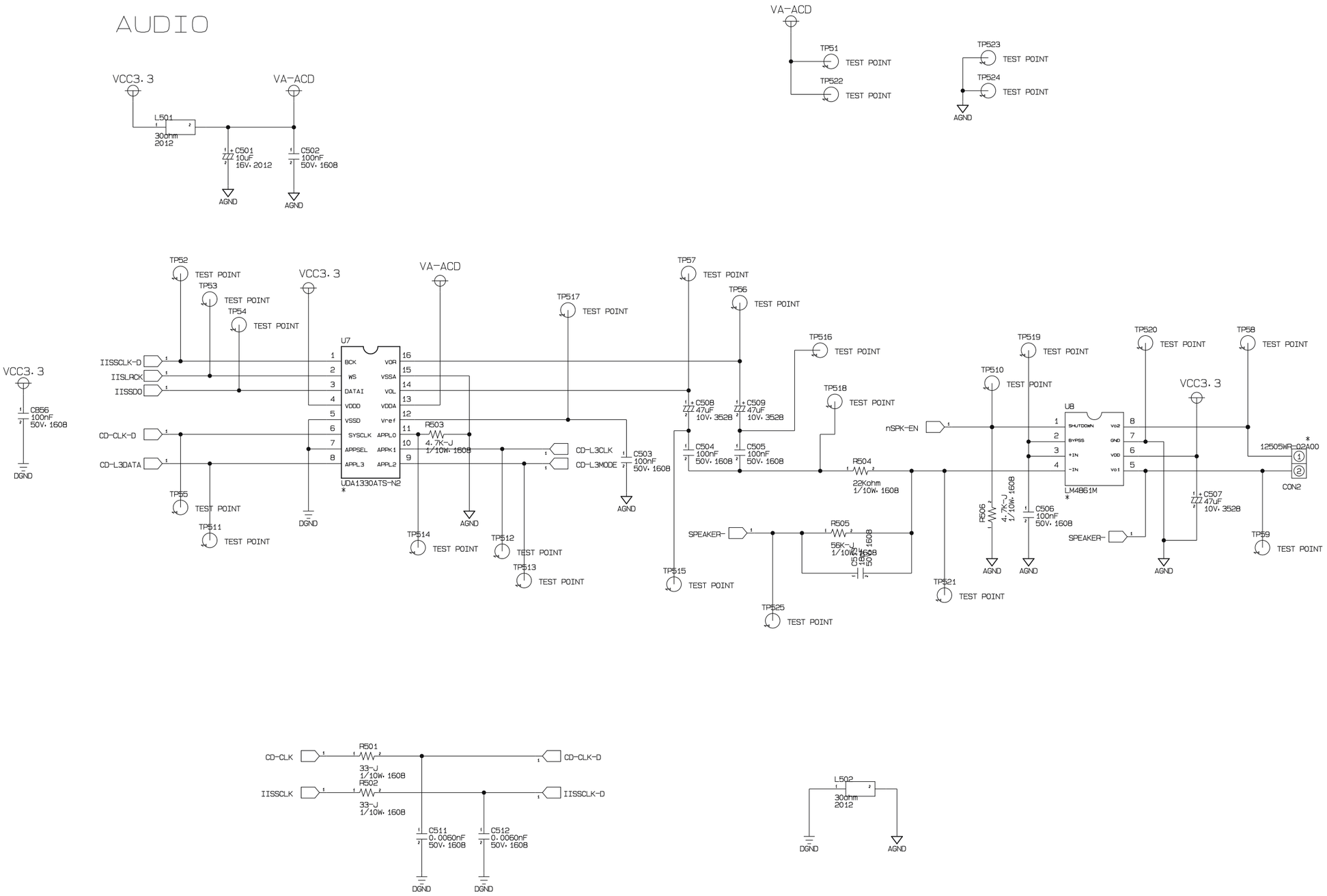

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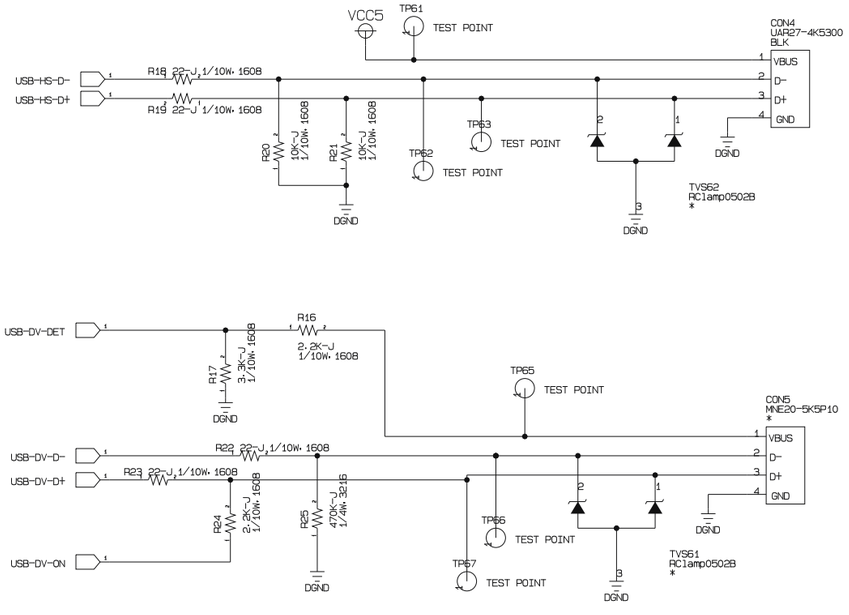
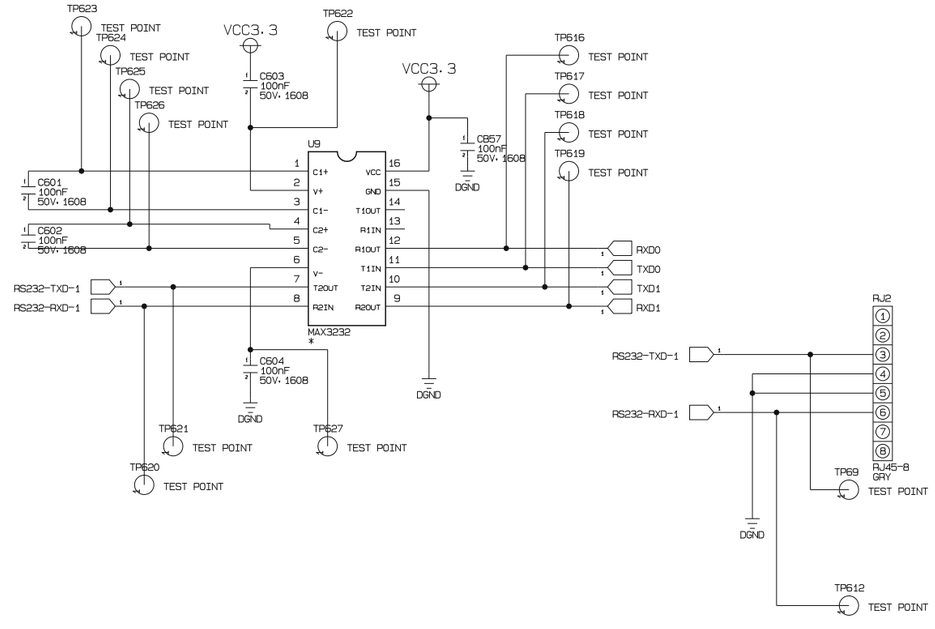
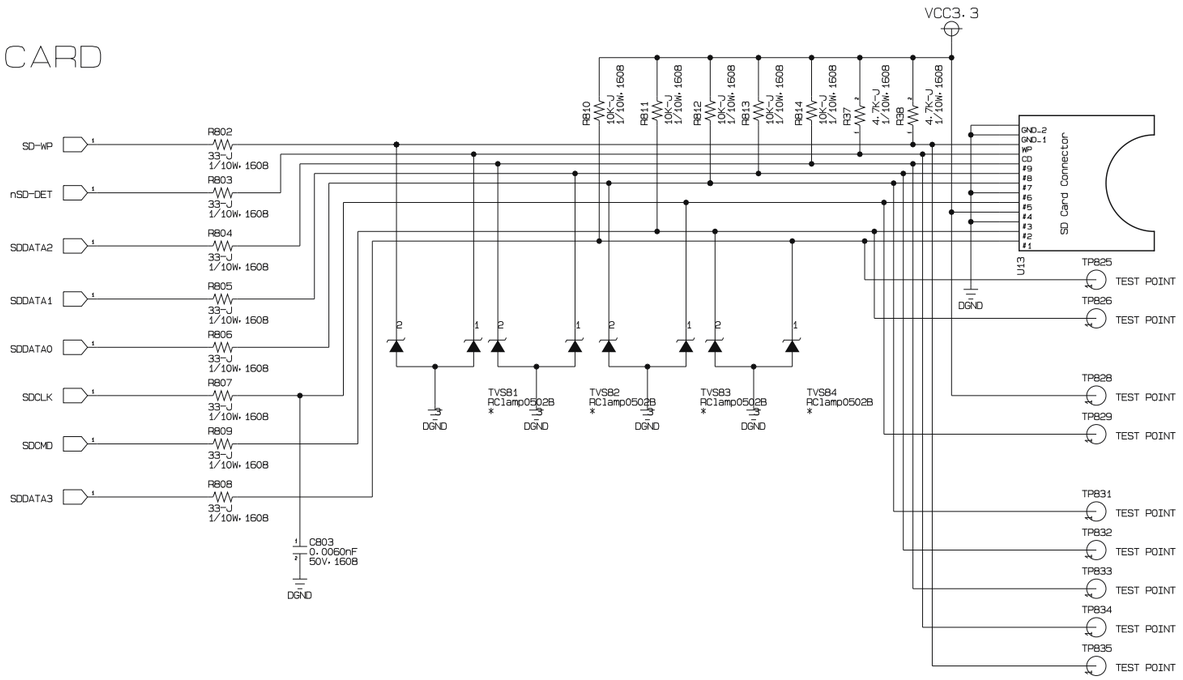
USB HOST / DEVICE

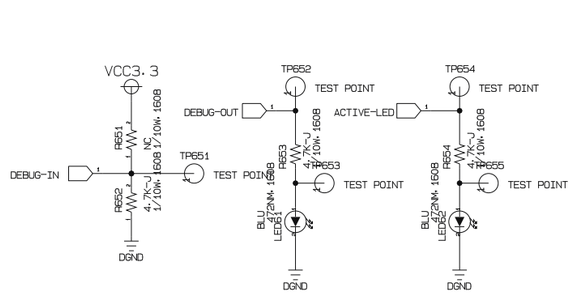


RS232



SD CARD





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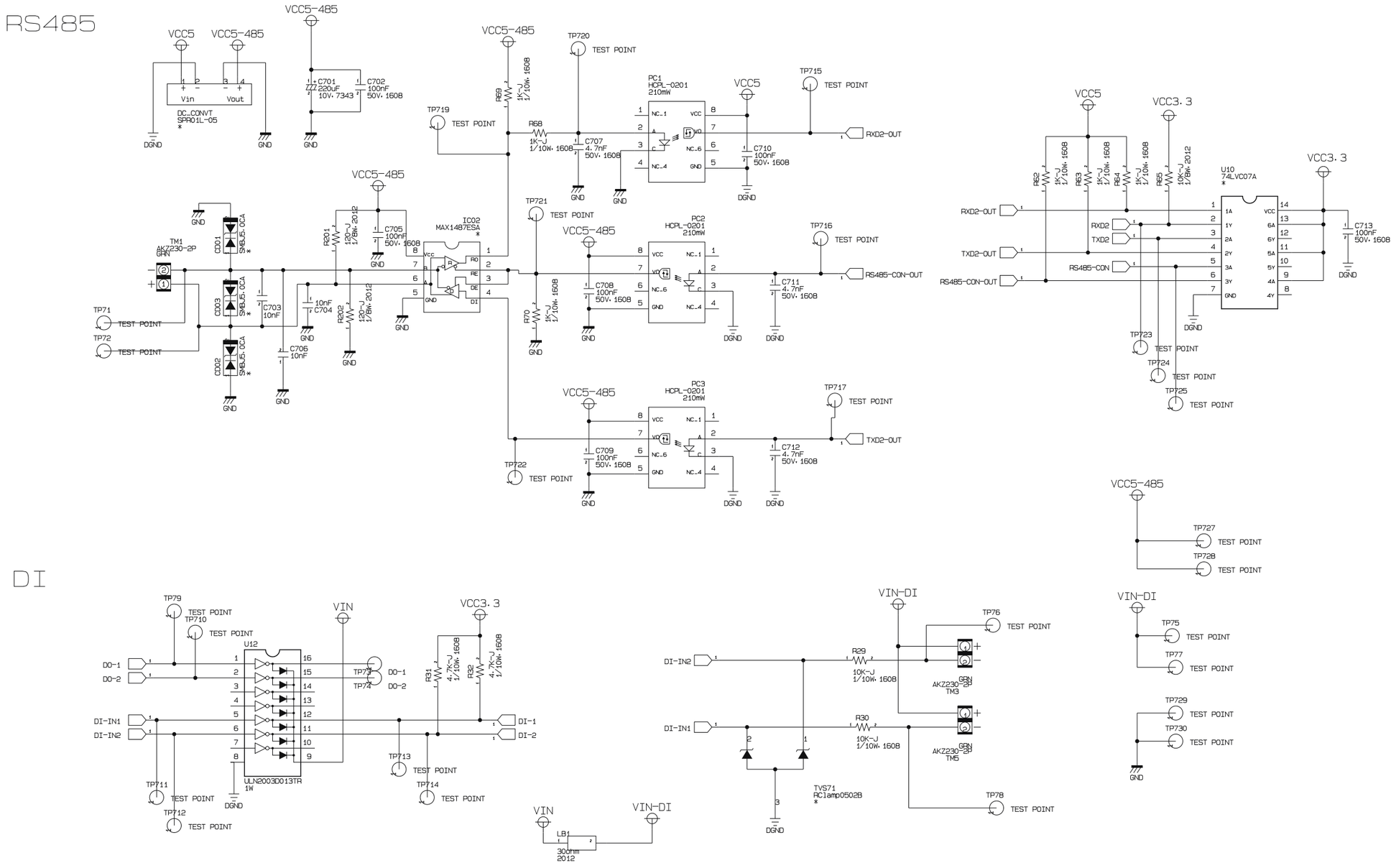

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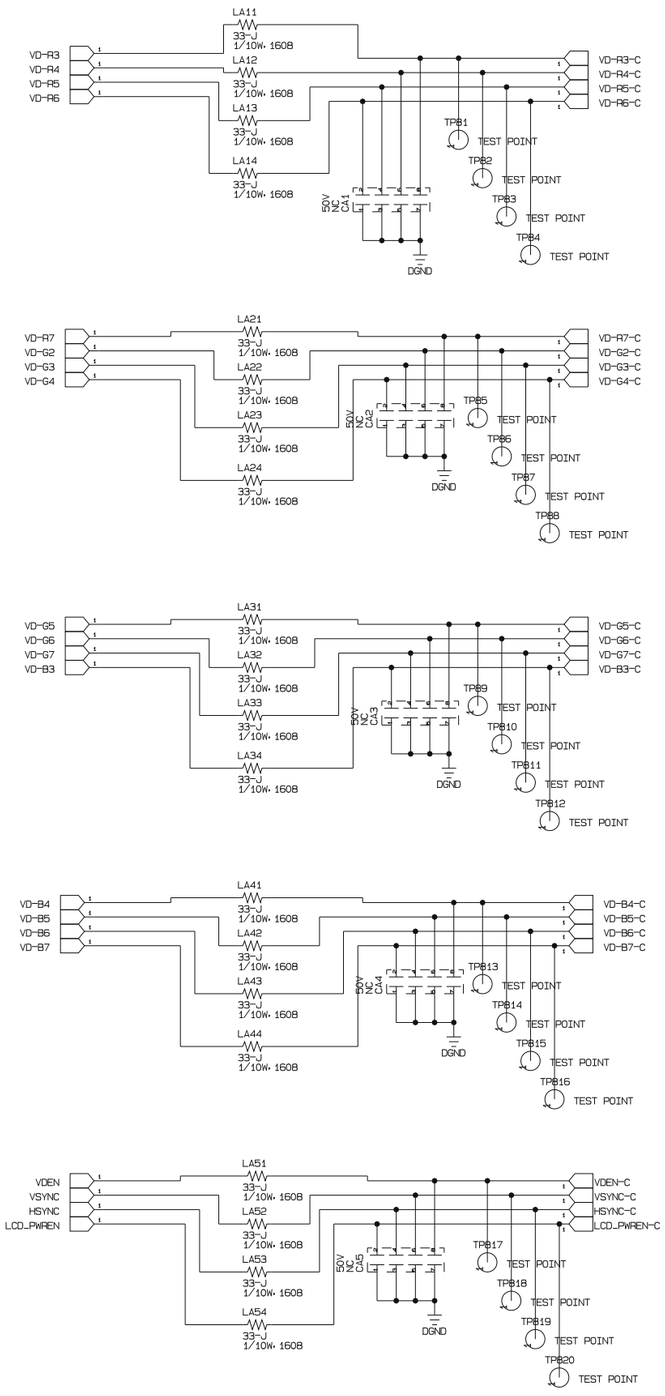

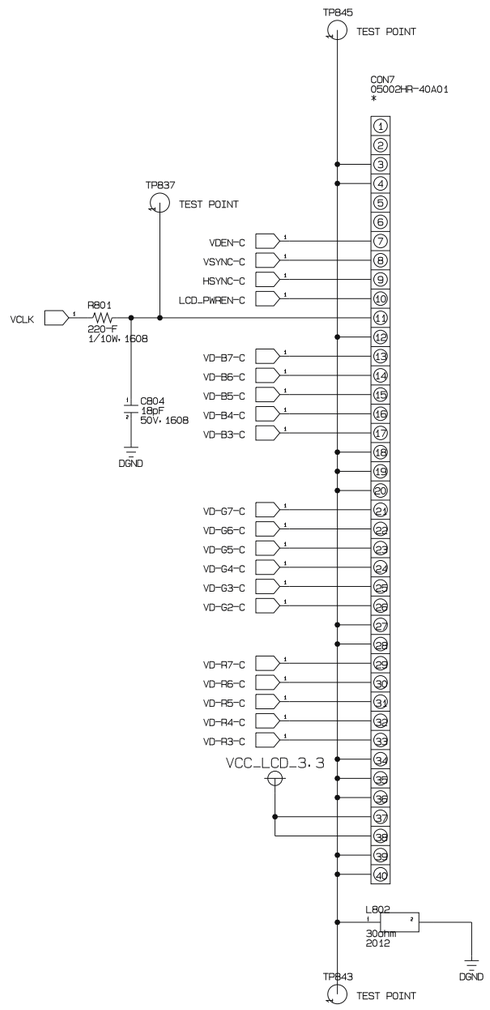

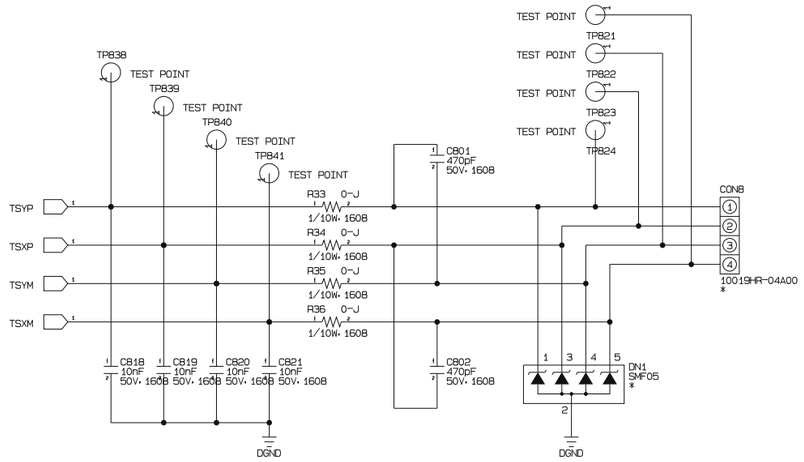

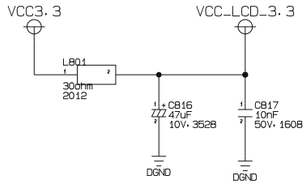

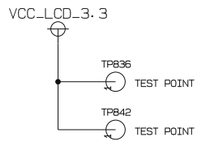

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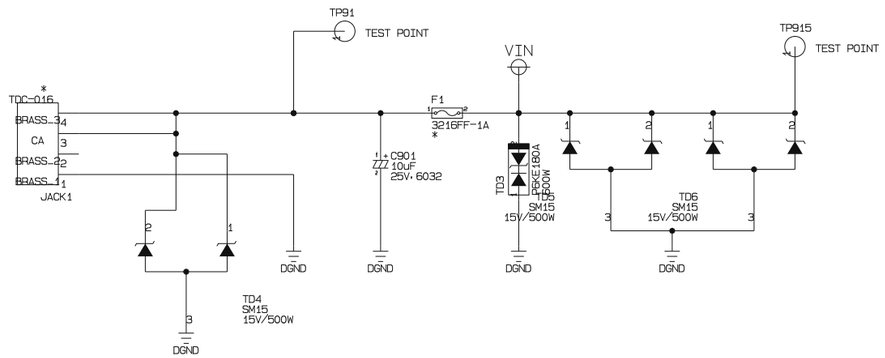
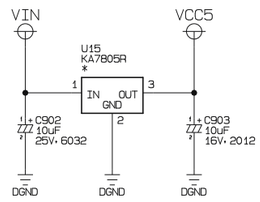
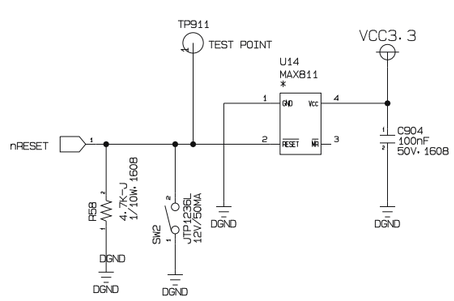
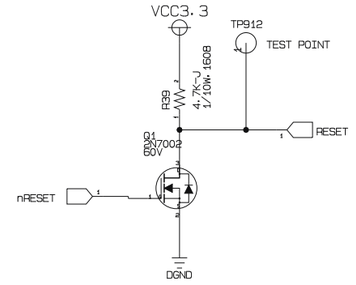
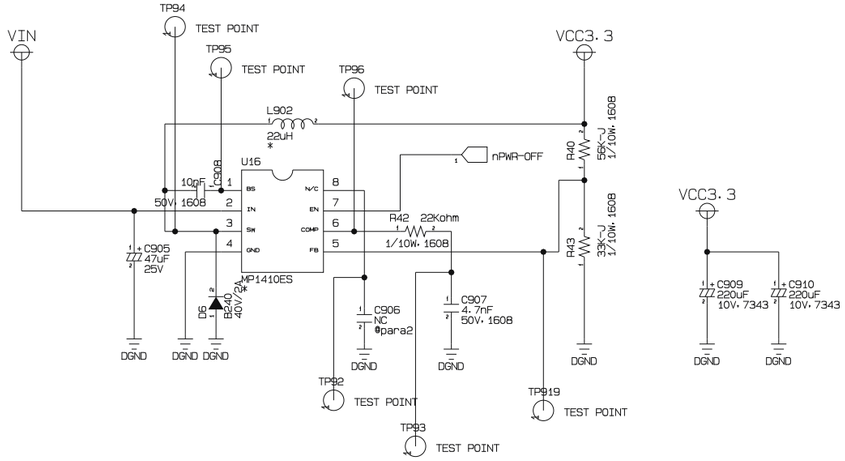
Schematic Diagram (Continued)

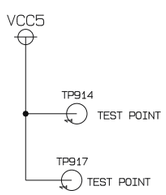


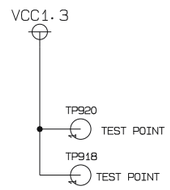


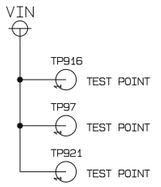


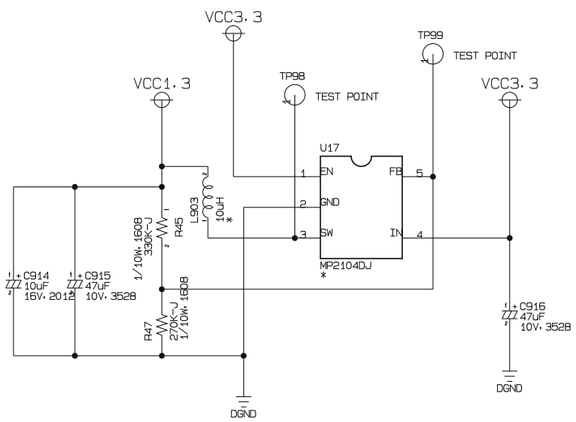


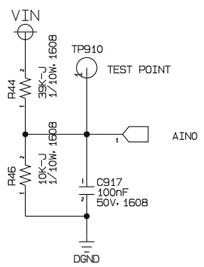












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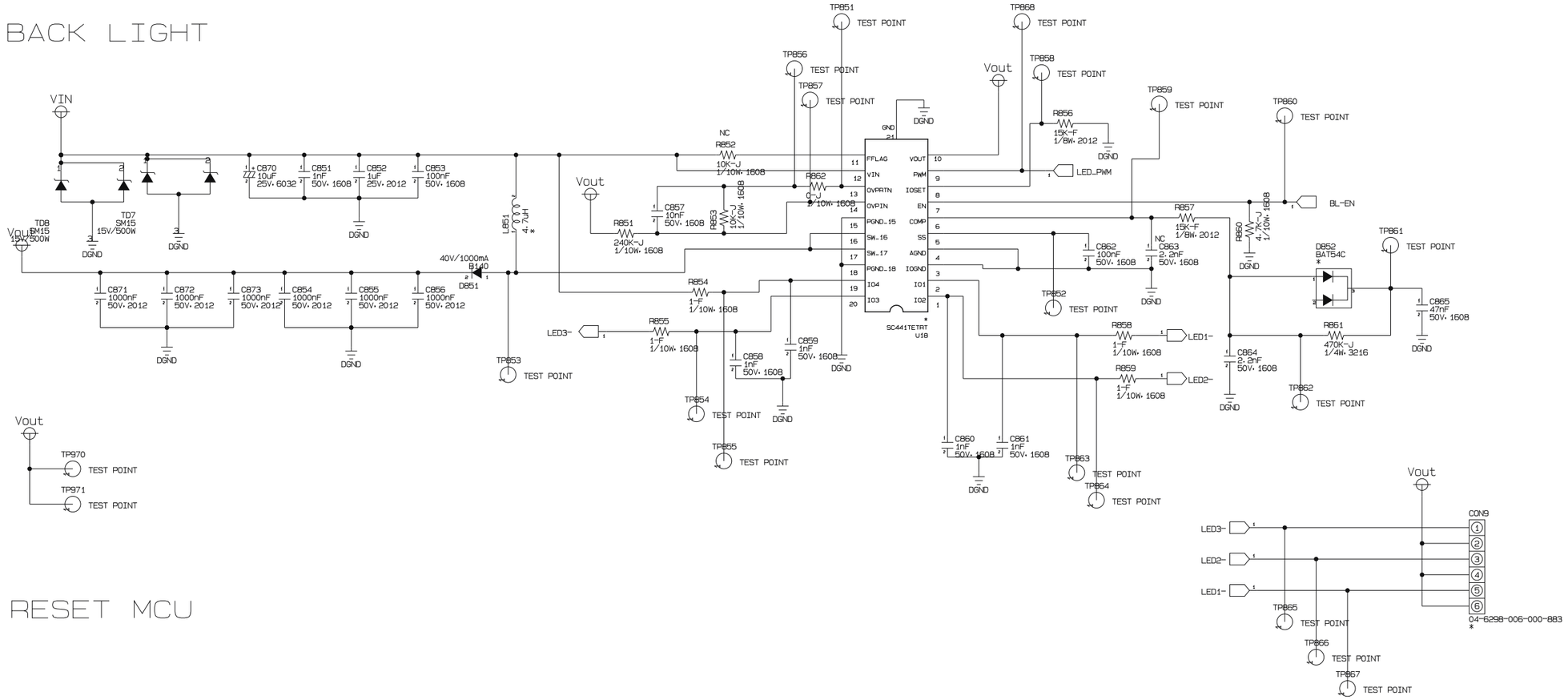
Schematic Diagram (Continued)



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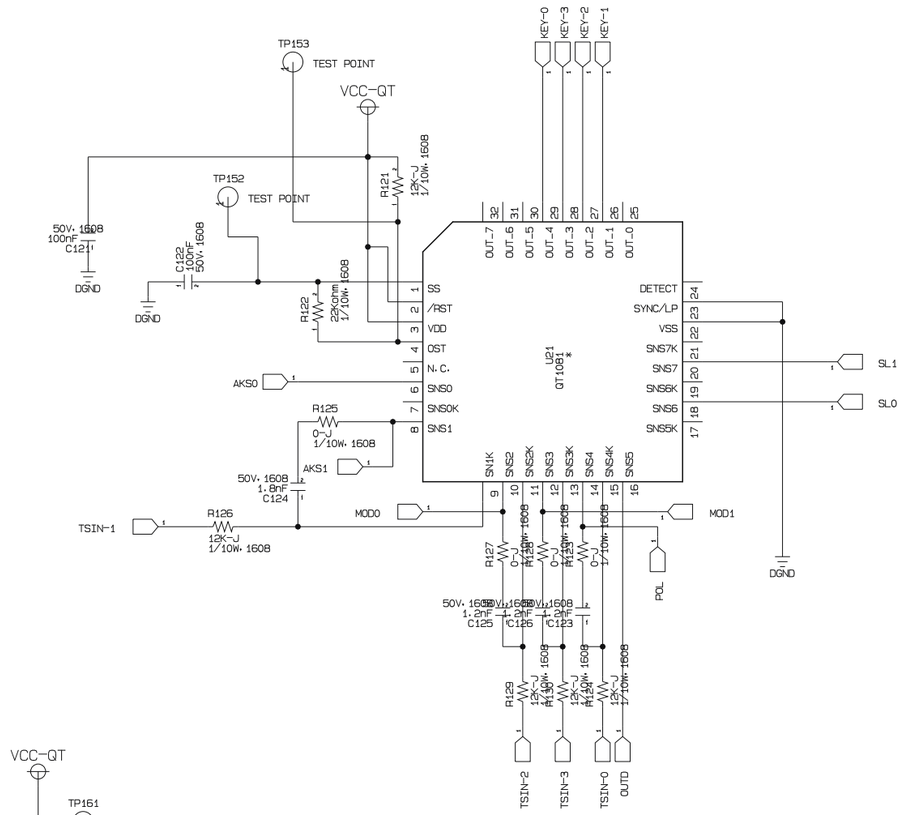
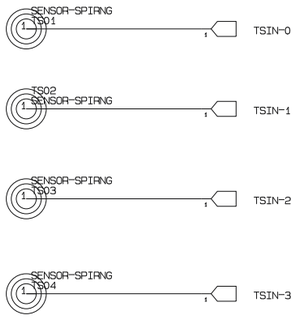
TOUCH S/W





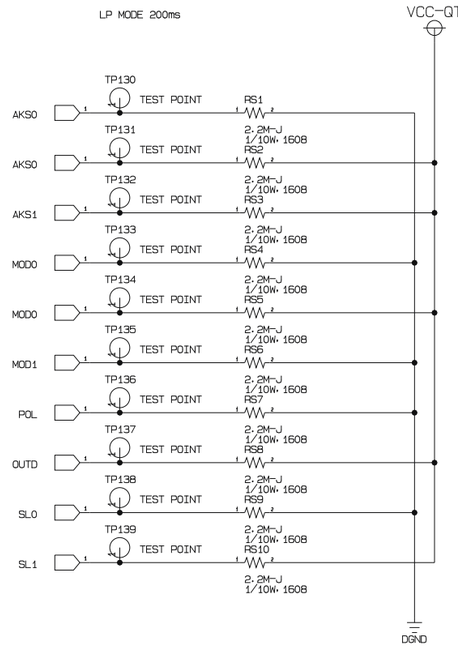
QT1080 SETTING

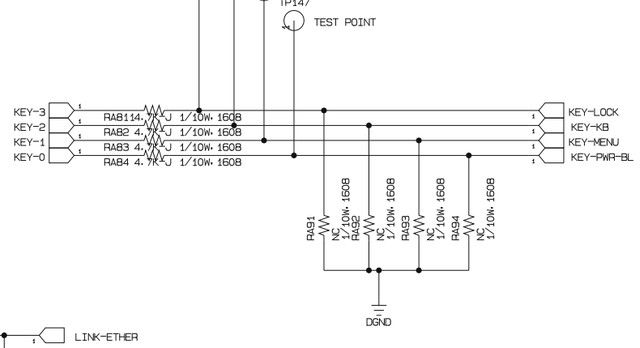
AKS0
H -> AKS MODE ON. GLOBAL
L -> AKS MODE ON. 2 GROUP

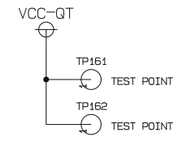
MODE
H -> CAL 60S
L -> CAL 10S

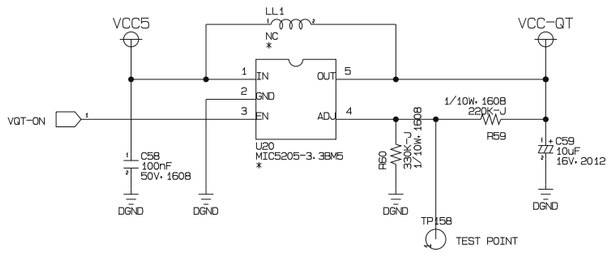
DIRECT MODE. ACTIVE HIGH

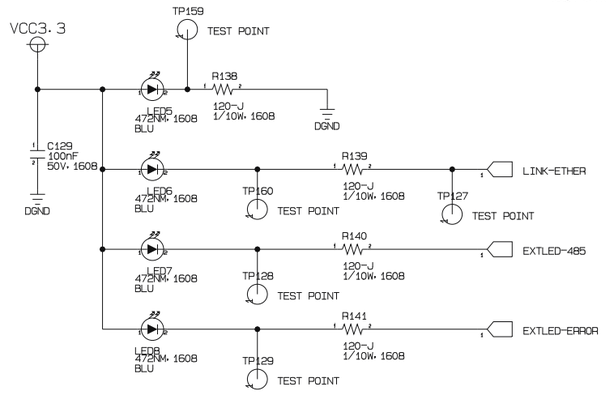
LP MODE 200ms











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9. Reference Sheet

■ S-NET mini Update

No.	Description
❶	Menu button
❷	Soft keyboard button
❸	Lock button
❹	Power & LCD backlight button

● What is an update?

Update is renewing the version of OS(Operating System) or Software(S-NET mini) used in S-NET mini for better function and the performance.

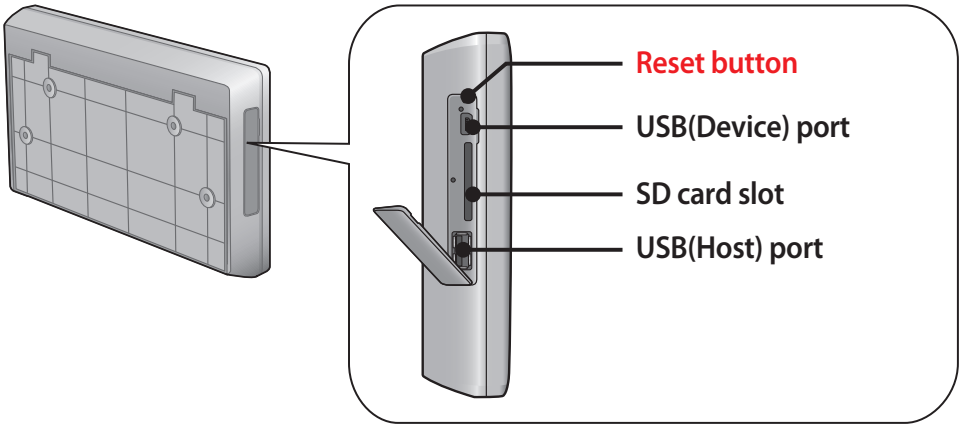
● Terms Used in Update

WinCE	WinCE is a variation of Microsoft's Windows operating system for minimalist computers and embedded systems.
O/S (Operating System)	An operating system (O/S) is the software to run the application. (Ex. Microsoft Windows XP, Windows 2000, Linux)
Boot-loader	Boot-loader is the first software that runs once the power turns on. Main purpose of this program is to prepare for the operating system to operate normally.
Eboot	Software for updating O/S and Boot-loader.
Software	This is a program that runs in Wince(S-NET mini).

⚠
◆ Image files for O/S and the Software(S-NET mini) should be saved on SD/MMS memory card.
◆ You need SD memory card reader to save O/S update files on to SD memory card.

■ Update - Starting O/S update

● Side view

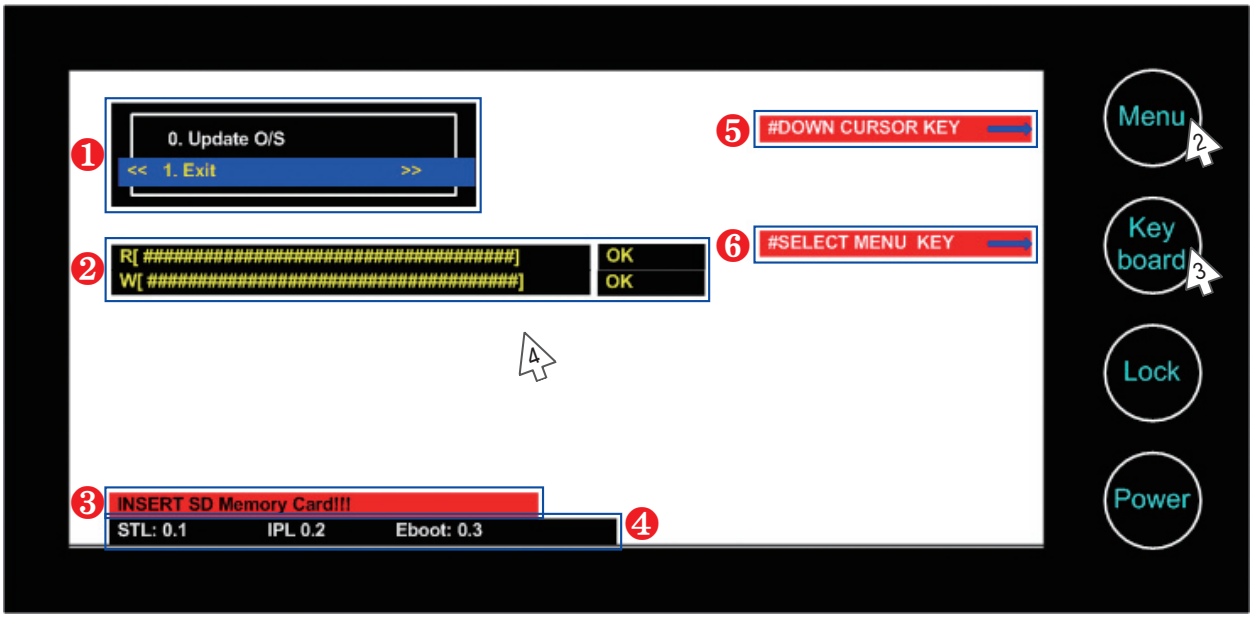


1. Press and hold the [Menu] button and press the [Reset] button on the side of the product.

▶ You can restart the S-NET mini when you press [Reset] button.

2. Check the O/S update window.

■ Update S-NET mini



No.	Description
❶	O/S update menu
❷	O/S update status
❸	SD memory card status
❹	Boot-loader version
❺	Menu cursor
❻	Select/Operate menu

1. Insert SD memory card in the SD card slot.

▶ SD memory card is in the slot : SD Memory Card is DETECTED. will show on the display.
▶ SD memory card is not in the slot : INSERT SD Memory Card!!! will show on the display.

◆ You cannot precede O/S update when the SD memory card is not inserted.

2. Press Menu button and select [0.Update O/S].

▶ Each time you press Menu button, either [0. Update O/S] or [1.Exit] will be selected on the O/S update menu. (In blue highlight)

3. Press Soft keyboard button to start the update.

▶ If you select [0.Update O/S], S-NET mini will be updated with O/S images in the SD memory card.
▶ If you select [1.Exit], S-NET mini will restart.

4. Check the O/S update status.

▶ [R] : Read from SD memory card, [W] : Write to SD memory card

▶ When O/S update is successful, OK will appear between [R] and [W].

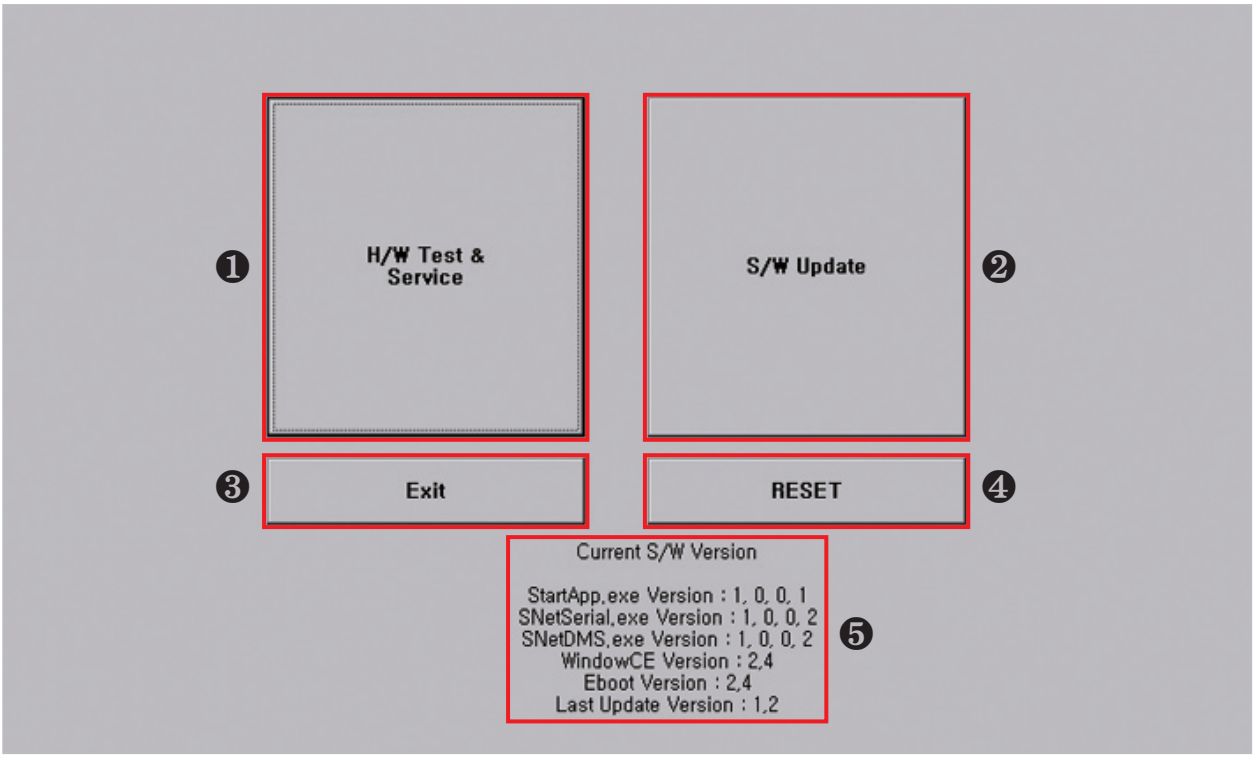
▶ When O/S update fails, FAILED will appear next to [R] or [W].

◆ When FAILED appears next to [R], press Soft Keyboard button repeatedly.
(It may occur when the SD memory card is not recognized.)

5. Select [1.Exit] and press Soft keyboard button when update is done.

▶ O/S update menu will disappear and S-NET mini will re-start.

■ Update - Software update



No.	Description
❶	Hardware Test menu
❷	S/W Update menu
❸	Exit software update.
❹	Reset
❺	Software and OS Version

1. Prepare SD memory card with saved 'AppRecover.exe' file.

▶ AppRecover.exe file source: ₩Storage Card₩

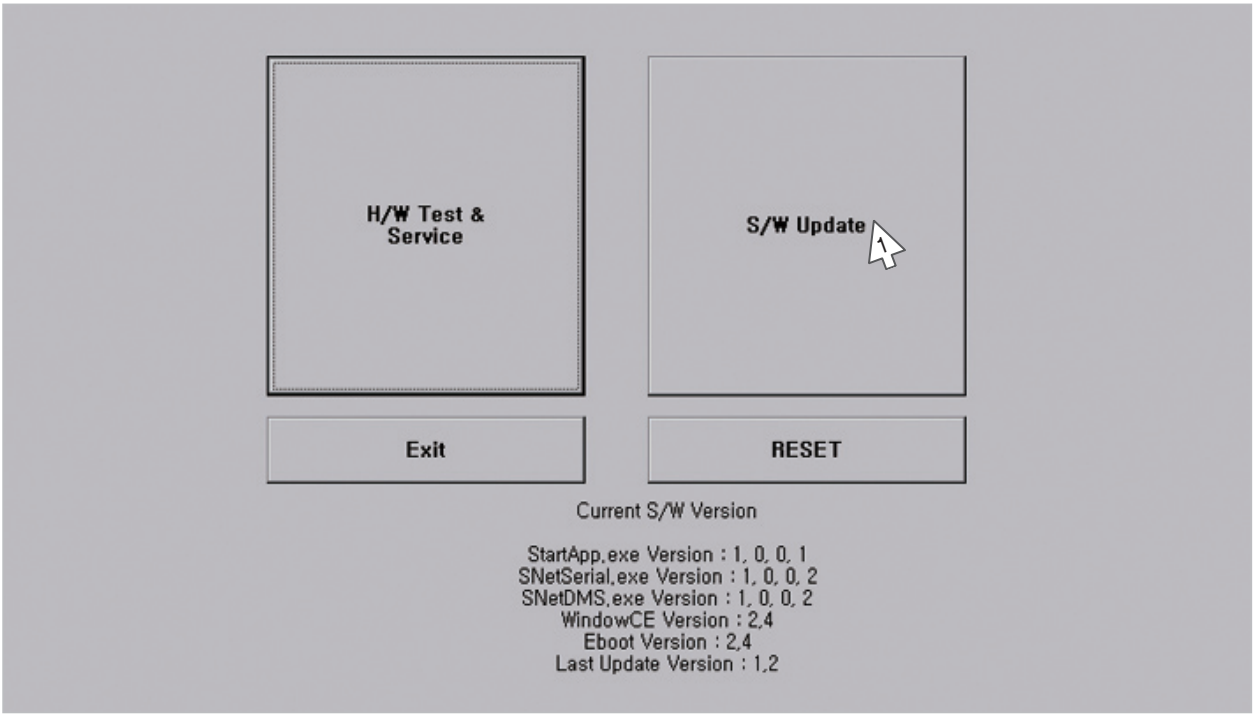
▶ File name of the Software to be updated : SNet_Mini_ver_xx_xx.dat, SNet_Mini_ver_xx_xx.lst (xx_xx: Version information)

2. Insert the SD memory card on the memory card slot located on the side of S-NET mini.

▶ When the SD memory card is inserted, H/W Test window will appear automatically.

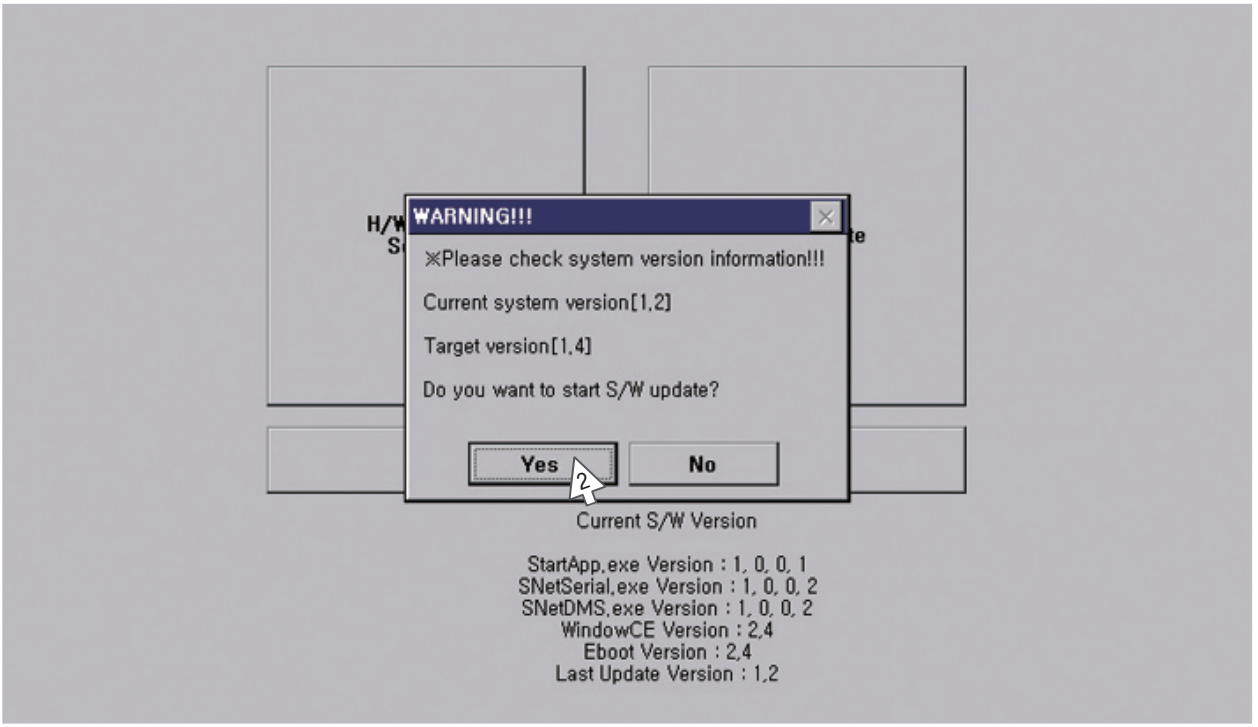
◆ Contact service center for the software (S-NET mini).

■ Update - Software update procedure



1. Tap [S/W Update].

▶ Information on Software version will appear on the screen.

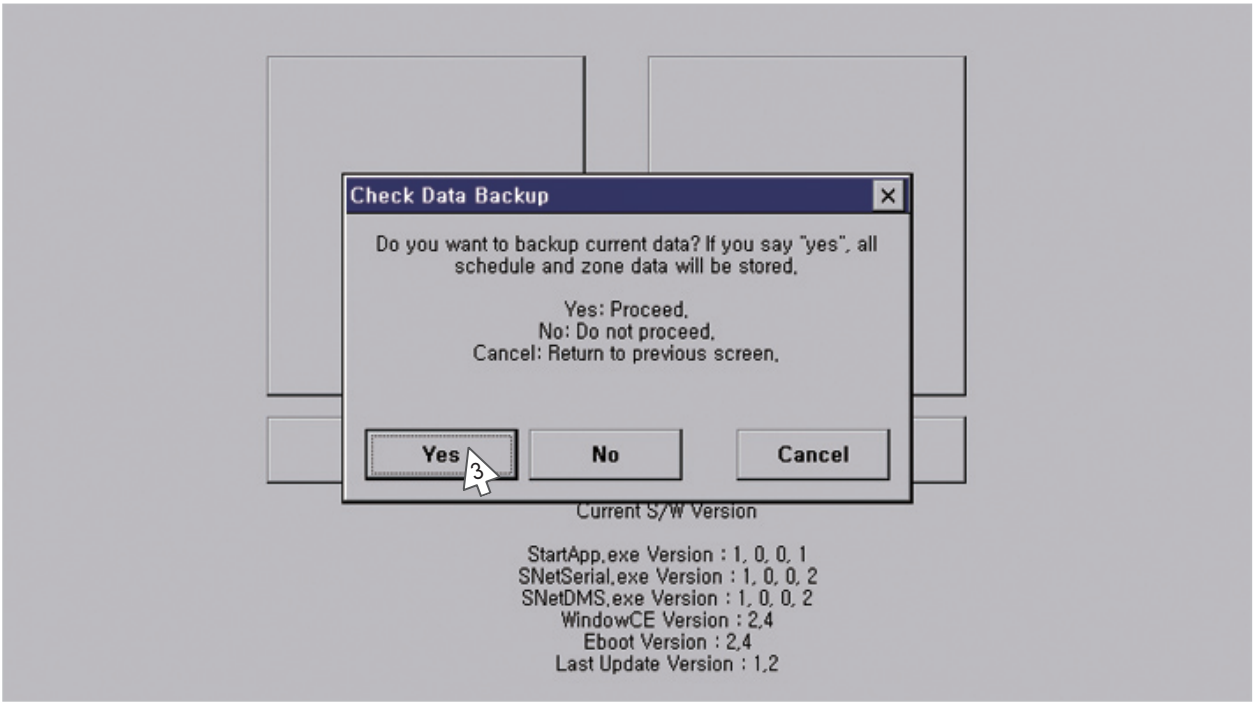


2. Tap [Yes].

▶ Check the software version to be updated.

▶ Tap [No], if you do not want to update software.

■ Update - Software update procedure (continued)

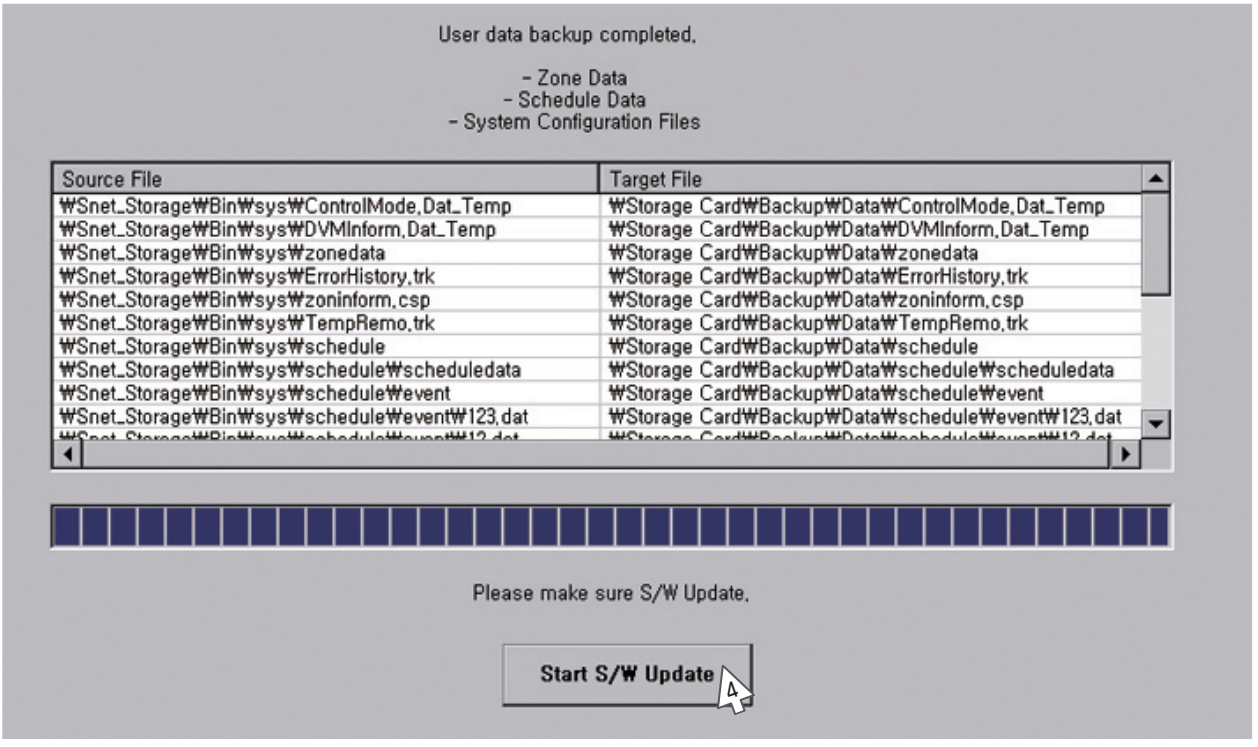

Check Data Backup
Do you want to backup current data? If you say "yes", all schedule and zone data will be stored.
Yes: Proceed.
No: Do not proceed.
Cancel: Return to previous screen.
Yes
No
Cancel
3
Current S/W Version
StartApp.exe Version : 1, 0, 0, 1
SNetSerial.exe Version : 1, 0, 0, 2
SNetDMS.exe Version : 1, 0, 0, 2
WindowCE Version : 2,4
Eboot Version : 2,4
Last Update Version : 1,2

3. Tap [Yes] to save(backup) the S-NET mini user data.

▶ User data includes Zone management, Schedule management and System setup data.

▶ Tap [No], if you do not wish to save the user data.
Software update will start without saving the user data.

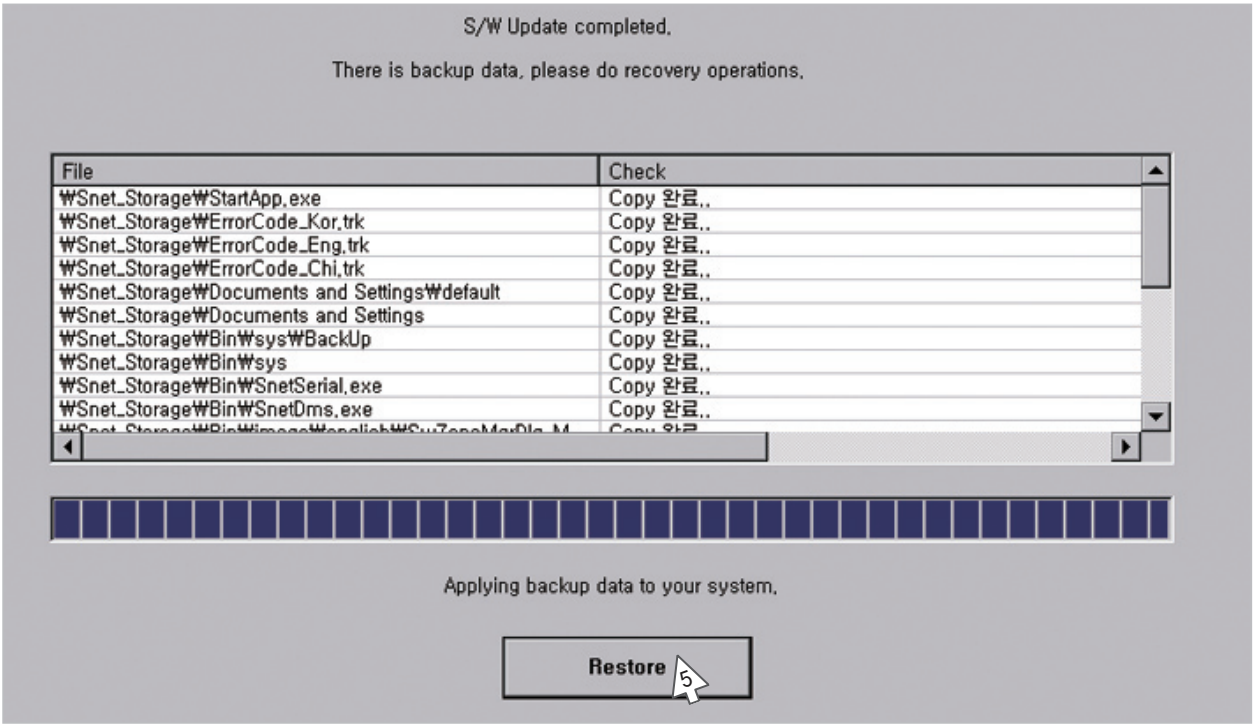
▶ Tap [Cancel] to cancel software update.



4. Tap [Start S/W Update].

▶ Do not remove the SD memory card during software update.

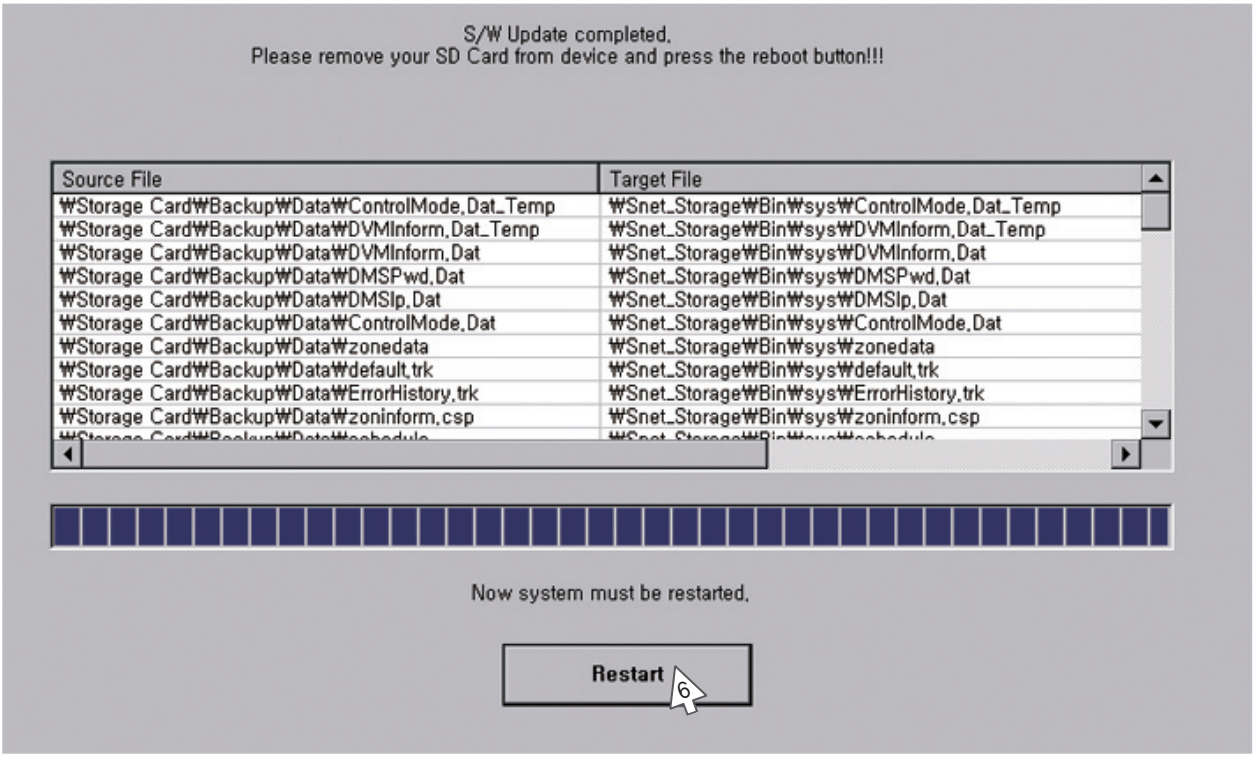
■ Update - Software update procedure (continued)



5. Tap [Restore].

▶ When you tap [Restore], saved user data, Zone management, Schedule management and System setup data will be restored.

▶ You may skip this stage if you have not saved(backup) the user data.



6. Remove the SD memory card and tap [Restart].

▶ S-NET mini will re-start with updated version.

▶ If you do not remove the SD memory card, software update window will appear again.

■ Available MMC/SD list

- To update OS and other applications, SD/MMC with minimum 128 MB is needed.

No.	Item	Manufacturer	Memory	Country
1	FLASH MMC	Trenscend	128MB	TAIWAN
2	FLASH MMC	Trenscend	256MB	TAIWAN
3	FLASH MMC	Kodak	128MB	CHINA
4	FLASH MMC	PDC	256MB	TAIWAN
5	FLASH MMC	Pretec	128MB	JAPAN
6	FLASH MMC	RiDATA (RS-MMC)	128MB	TAIWAN
7	FLASH MMC	RiDATA (RS-MMC)	256MB	TAIWAN
8	FLASH MMC	LG	128MB	TAIWAN
9	FLASH MMC	LG	256MB	TAIWAN
10	FLASH MMC	LG	512MB	TAIWAN
11	FLASH MMC	Twinmos	128MB	TAIWAN
12	FLASH MMC	TeraVit	128MB	KOREA
13	FLASH MMC	TeraVit	256MB	KOREA
14	FLASH MMC	TeraVit	512MB	KOREA
15	FLASH MMC	TeraVit	1GB	KOREA
16	FLASH MMC	ATP	128MB	TAIWAN
17	FLASH MMC	Transcend Mobile ; BMCG	128MB	TAIWAN
18	FLASH SD	Lexar	128MB	JAPAN
19	FLASH SD	Lexar	256MB	JAPAN
20	FLASH SD	Lexar	512MB	USA
21	FLASH SD	Sandisk	128MB	CHINA
22	FLASH SD	Sandisk	256MB	CHINA
23	FLASH SD	Sandisk	512MB	CHINA
24	FLASH SD	SANDISK Ultra II	1GB	CHINA
25	FLASH SD	PQI	128MB	CHINA
26	FLASH SD	PQI	256MB	TAIWAN
27	FLASH SD	PDC	128MB	TAIWAN
28	FLASH SD	PDC	256MB	TAIWAN
29	FLASH SD	PDC	512MB	TAIWAN
30	FLASH SD	Panasonic	128MB	JAPAN
31	FLASH SD	Hagiwara	128MB	TAIWAN
32	FLASH SD	Hagiwara	256MB	TAIWAN
33	FLASH SD	Trenscend	128MB	CHINA
34	FLASH SD	KingMax	128MB	JAPAN
35	FLASH SD	Kodak	128MB	CHINA
36	FLASH SD	TDK	128MB	JAPAN
37	FLASH SD	TDK	256MB	JAPAN
38	FLASH SD	RiDATA	128MB	JAPAN
39	FLASH SD	RiDATA	256MB	JAPAN
40	FLASH SD	Twinmos	256MB	TAIWAN
41	FLASH SD	Kingston	128MB	JAPAN

■ Available MMC/SD list (continued)

- To update OS and other applications, SD/MMC with minimum 128 MB is needed.

No.	Item	Manufacturer	Memory	Country
42	FLASH SD	Silicon Power	512MB	TAIWAN
43	FLASH SD	Billionton	128MB	TAIWAN
44	FLASH SD	Billionton	256MB	TAIWAN
45	FLASH SD	Billionton	512MB	TAIWAN
46	FLASH SD	X-PERT	128MB	TAIWAN
47	FLASH SD	X-PERT	256MB	TAIWAN
48	FLASH SD	LG	256MB	TAIWAN
49	FLASH SD	LG	512MB	TAIWAN
50	FLASH SD	Simpletech	128MB	JAPAN
51	FLASH SD	AND	256MB	TAIWAN
52	FLASH SD	Zyrus	256MB	TAIWAN
53	FLASH SD	A-DATA	256MB	TAIWAN
54	FLASH SD	A-DATA	512MB	TAIWAN
55	FLASH SD Mini	Hagiwara Mini	128MB	JAPAN
56	FLASH SD Mini	KingMax Mini	128MB	CHINA
57	FLASH SD Mini	KingMax Mini	256MB	CHINA
58	FLASH SD Mini	KingMax Mini (10MB/s)	512MB	TAIWAN
59	FLASH SD Mini	Zyrus(Mini)	256MB	JAPAN
60	FLASH SD Mini	Imation ; Mini	128MB	KOREA
61	FLASH SD Mini	Imation ; Mini	256MB	KOREA
62	FLASH SD Mini	Imation ; Mini	512MB	KOREA
63	FLASH SD Mini	Imation Mini	512MB	CHINA
64	FLASH SD Mini	SANDISK Mini iSOI	256MB	TAIWAN
65	FLASH SD Mini	S/D SANDISK ; Mini	1GB	TAIWAN
66	FLASH SD Mini	A-DATA Mini	128MB	TAIWAN
67	FLASH SD Mini	A-DATA Mini	256MB	TAIWAN
68	FLASH SD Mini	A-DATA Mini	512MB	TAIWAN
69	FLASH SD Mini	ATP (10MB/s) Mini	128MB	TAIWAN
70	FLASH SD Mini	ATP (10MB/s) Mini	256MB	TAIWAN
71	FLASH SD Mini	ATP (10MB/s) Mini	512MB	TAIWAN
72	FLASH SD Mini	Trenscend Mini	1GB	TAIWAN
73	FLASH SD Mini	TeraVit Ultra Mini	256MB	KOREA
74	FLASH SD Mini	TeraVit Ultra Mini	512MB	KOREA
75	FLASH SD Mini	Samsung PLEOMAX Mini	256MB	KOREA
76	FLASH SD Mini	Samsung PLEOMAX Mini	512MB	KOREA
77	FLASH SD Mini	Samsung PLEOMAX Mini	1GB	KOREA
78	FLASH SD Mini	GoldFlash	128MB	KOREA
79	FLASH SD Mini	Mini	256MB	TAIWAN

GSPN(Global Service Partner Network)

Area	Web Site
North America	http://service.samsungportal.com
Latin America	http://latin.samsungportal.com
CIS	http://cis.samsungportal.com
Europe	http://europe.samsungportal.com
China	http://china.samsungportal.com
Asia	http://asia.samsungportal.com
Mideast & Africa	http://mea.samsungportal.com

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